

BENNITT
LLLUSTRATED
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GUIDE
PANAMERICAN
EXPOSITION.

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# Exposition And How to See It



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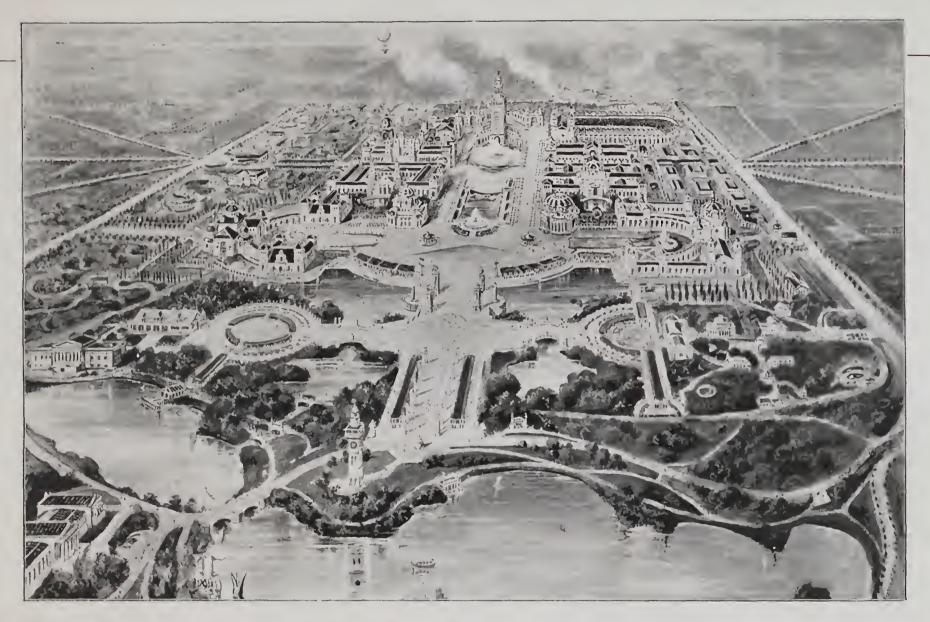
Electric Tower (from plaster model)

With a Condensed

Guide to Buffalo

and Niagara Falls





The Birdseye Fiew of the Exposition shows an area half a mile wide, and a mile and a quarter long, or about 350 acres. The grounds are in the northern part of the city and include the most picture sque section of Delaware Park. The landscape is richly embellished with water features, groves and gardens, and the principal buildings are arranged about a system of courts of exceptional beauty. The brilliant illumination of the entire Exposition at night makes a scene long to be remembered.



Am GOING TO ASSUME, in beginning this little book, that you are entirely unacquainted with the Pan-American Exposition—that you expect me to tell the whole story, and to be quick about it, too. "Pan-American" is a word in the Standard Dictionary, and means "all-American." So, when a number of Buffalo gentlemen at the Atlanta Exposition said to one another: "Why not an Exposition at Buffalo for all the Americas and the Americas only?" they chose "Pan-American" for the name. The

idea grew like Jack's beanstalk, till it reached a height and an importance beyond all expectation. The business men of Buffalo, young and sinewy with enterprise, joined hands as a band of brothers and took up the mighty task. Several hundred of them broke bread together at a formal banquet one night to decide whether the project should live or die. Before they parted company they had subscribed more than half a million dollars, and before the week was out the million mark had been passed. Hundreds of thousands more were added; the State of New York pledged \$300,000 and the Congress of the United States appropriated \$500,000. Nearly 12,000 citizens became subscribers to the Exposition stock, and the railroad and other corporations

assisted liberally. Bonds to the amount of \$2,500,000 were issued, and were taken by banks and other conservative investors. The business management of the great enterprise, which represents a total expenditure of about \$10,000,000, was entrusted to a board of 25 directors chosen by vote of the stockholders from the most substantial and progressive business men of Buffalo. The directors in turn sought the assistance of the man best qualified for the onerous responsibility of Director-General and found him in the person of the Hon. William I. Buchanan, at that time United States Minister to the Argentine Republic. With the business organization thus perfected the development of the Exposition went forward with a rush. Ground was first broken on September 26, 1899, so that the vast work of construction was accomplished within a year and a half.

# "Magnificent it shall be," said they.

"Let's build the most beautiful group of Exposition buildings the world ever saw," said one of the directors to the others, one day. "Let's use Niagara power to give the scene a day light brilliancy at night," said another. "Let's make the grounds a fairyland of flowers," proposed a third. "And



add the glow of rich and brilliant color decorations to the buildings," chimed in a fourth. "And embellish the architecture with beautiful sculptures," suggested still another. "Let us have beautiful pools and dancing fountains, and water gardens, and sodded plots and mossy banks; let's omit nothing that will make the set picture one that shall enrapture every beholder and make all the world praise Buffalo for the good she shall have done for art and science, and the advancement of civilization, and, more than all, for giving her guests the most novel and beautiful and royal entertainment it has ever been their pleasure to have." Upon such lines the Exposition in its architectural and decorative features has been worked out till here you have it complete, to speak for itself in a language you shall not forget, to be forever an inspiration to all who shall behold.



The great purpose in the minds of those who have been identified with the Exposition has ever been to show, in the most pleasing and forcible way, the great progress of the peoples of the Western Hemisphere during the century just closed, and to bring them into a more intimate social and commercial relationship. How well this has been done may now be seen.

# Through a Tree-Embowered Way.

The Exposition has many entrances, but while I may name them all, I shall show you but one. Be not too eager—as some men go through life—looking for something always far away and forgetting the loveliness within arm's reach—I know you have already caught glimpses of stately towers and majestic domes, but be patient. Let's be formal, and enter the Exposition by its front door, the beautiful southern gateway on Lincoln Parkway.

Tall maples and elms almost intertwine their branches above us and the leaves





whisper to one another in the delightful summer atmosphere. The shrubbery is gay with blossoms, yielding a two-fold pleasure of color and perfume. We are within the charming precincts of Delaware Park. Here at the right is the lake, three-quarters of a mile long. We might have taken a tiny motor boat at the water gate, corner of Delaware and Forest Avenues, and approached the Exposition by the water route. On the left as we go is the Albright Gallery of Art, costing \$400,000, and at first intended for Exposition uses, but unseen conditions at the marble quarries compelled delay, and a fire-proof building was constructed upon another site for the fine arts exhibit. We cross the three-arch bridge of massive masonry, called the Bridge of the Three Americas, built by the city of Buffalo in order that the Approach to the Exposition should lack nothing to complete the harmony and stateliness of the whole.

# A Temple of History.

The North Bay is at the left and upon the farther bank is a noble edifice of Vermont marble, the New York State Building. It is a permanent structure, costing \$175,000. The State officials and the people of the State will use it for reception purposes and as a rendezvous during the Exposition. When these festivities are ended it will become the abiding place of the Buffalo Historical Society's precious collection of relics which tell of years and of people that are no more, of men whose deeds live after them and whose memories the world is proud to cherish. Take a glance backward and you will see a pretty stone building on the south bank of the lake—the new casino and boat house for Exposition uses, and for permanent convenience, as well. This, also, was built from city funds, and is further evidence of the coöperation and help given by the city officials to the Exposition.





# Marine Tragedies and Comedies.

Our Uncle Sam has established one of his life-saving stations, with full equipment for exhibition purposes, on the shore of the lake, a few rods east of the bridge. Ten brave men give daily demonstrations of the efficiency and usefulness of the life-saving service of the Government. Life saving has become a science by the development of years. It is as much a trade as any other, so many are the implements and appliances which require special knowledge and training for those who would use them skillfully and effectively. Here you can buy a reserved scat for a marine tragedy or comedy, as the actors may will it, and be entertained in a manner that is novel, and impossible elsewhere.

# A Daring New England Yankee.

Captain Joshua Slocum would grieve if we passed him by, for he is a part of the Exposition as well worth seeing as any other. He is the New England Yankee who sailed round the world alone, navigating

48,000 miles on all the seas, going where the wind blew him, battling with hurricane and simoon, and riding out many a storm upon many a trackless waste of the bending ocean. Here he is with the self-same sloop that bore him thus around the globe, the staunch single-masted "Spray," steady as an island when the demon of the storm threatened to make shreds of sails and dig a watery grave for the gallant captain, who was also the crew. The captain made ports where none were ever made before, and picked up numberless curios which constituted the cargo of the "Spray" when he once more hove to in Boston harbor. This curio collection, as well as his vessel, he has brought with him to the Exposition, and it will be to the profit of every visitor to shake hands with the gallant captain, a man of stout heart and steady nerve, a veteran of the salt seas, and a man of mighty soul and character.

#### A Miracle! a Dream! a Revelation!

I knew it! You never expected it! Much as you may have read about the



tion by its own distinguishing loveliness. A thousand feet to the right is the

Exposition you had no conception of its real glory. How valueless are words to describe color, form, contrasts, grouping, dignity! Seeing, only, is believing. I cannot hold you back nor divert you now. You will not mind the smaller buildings devoted to States and special purposes. We shall come back to those. We pass up the Approach between stately columns. The magnificent pylons of the Triumphal Bridge, surmounted by colossal mounted standard-bearers, forty odd feet high, the Exposition masterpieces of Karl Bitter, rise before us. All about the bases of the pylons and upon their broad sides are rich sculptures, the whole emblematic of the triumph of America over tyranny and despotism.

Grottoes such as Nature Makes.

Beneath the bridge are the loveliest of grottoes, possessing the many wonders of subterranean formation, a hint of the strange workings of nature in the dark caverns and recesses of the earth. These may be reached only by boat from the Grand Canal.

#### A Few Exclamations Now, Please.

You will understand now why I brought you into the Exposition from the south and by way of the Triumphal Bridge. By entering from the north, from the railway station,

you are plunged at once, without preparation, into the midst of the Exposition. From the south it unfolds like a flower. The eve here revels amid scenes of unprecedented splendor. Never a festival so gay as this, never an Exposition so richly

endowed with all the elements of beauty. Every vista a charming one and every object winning the atten-





Triumphal Bridge.



ushers the visitor into the midst of the Exposition. The bridge is a stately structure, swung from four monumental piers, 100 feet in height. Each pier is surmounted by a sculptural group—a muscular youth on the back of a horse 30 feet in height, which rears above a mass of trophics indicative of feudalism, slavery and subordination to tyrannical power, the whole expressing the triumphal struggle of the people of the United States to free themselves from the institutions of despotic ages and governments. These

groups were modeled by Karl Bitter, the Director of Sculpture, who with the assistance of the most famous American sculptors has designed over two hundred pieces of original decorative statuary-more than has been used at any previous Exposition, The piers of the bridge were designed by John M. Carrère, Chairman of the Board of Architects. Terminating the buttresses to the piers are four groups of trophies, typifying Peace and Power, modeled by Mr. Augustus Lukeman. The cables connecting the piers, and running north and south, carry enormous festoons, shields of polished copper, flags, and coats of arms of the various Pan American countries. In the niches on the side of the bridge are statues symbolical of Charity, Love of Truth, Patriotism, Liberty, etc. On each side of the bridge are fountains composed of groups of rearing horses and figures clustered about a tall pole, from which a huge silken flag floats. The fountain on the east typifies the Atlantic Ocean, and that on the west the Pacific, with one base uniting the two. The sculpture in connection with these is by Philip Martiny. The water from these fountains gushes forth from the side of the bridge in a massive waterfall into the Mirror Lake, passing through the subterranean grotto, which constitutes one of the unusual features of the Exposition. This grotto has been modeled after the famous Buttes de Chaumont, at Paris, by Mr. Rudolf Ulrich, the landscape architect.

great building of the United States Government flanked on either side by colonnades and pavilions for special exhibits. A thousand feet to the left is the

Horticulture Building, the great central structure of another magnificent group, including the Mines and Graphic Arts Buildings. To the northward, 2,000 feet, the Electric Tower rises with inspiring majesty.

# This Open Space is the Esplanade.

The immediate foreground from where we stand is the Esplanade, nearly 2,000 feet from east to west and 500 feet across. The two long curved columinated structures at the right and left on the southern side of the Esplanade are called pergolas, with the accent on the "per." These are places for dainty luncheons and quiet observation. The designer, surely, must have had in mind the sultry days at other Expositions, for these buildings almost complete the shaded circuit, so that the visitor may go nearly the entire round of the Exposition without exposure to the midsummer sun. The Esplanade, with its band stands and abundant space, is the place of open air concerts and for formal ceremonies in connection with the Exposition. Sunken gardens, fragrant and beautiful with flowers



"GODDESS OF LIGHT." Crowning figure on the Electric Tower. By Herbert Adams.



and fountains, and set with graceful sculptures, adorn either arm of the Esplanade. In the eastern part are the Fountains of Man, of Prometheus and of Lycurgus. In the western part are the Fountains of Nature, of Ceres and of Kronos.

#### We Come to the Court of Fountains.

Let us cross the Esplanade to the Court of Fountains, the central court of the Exposition. It is 500 feet wide and about 1,000 feet from north to south. At the corners of this court and the Esplanade stand the beautiful domed buildings—the Temple of Music on the left and the Ethnology Building on the right. On the east

side, also, are the Manufactures and Liberal Arts, and the Agriculture Buildings. On the west side, the Machinery and Trans-

portation, and Electricity Buildings. The general style of architecture is that of the Spanish Renaissance, rich in plastic ornamentation, and the beauty heightened with brilliant and harmonious colors. Even the color scheme represents the advancement of knowledge, the growth of civilization, and the development of our finer sensibilities and appreciation of art. From the strong and garish colors such as delighted the aborigines—the war paints of the wild races—the eye may trace the change to the finer and softer tints, culminating in the Electric Tower. The pleasing possibilities of color decoration for exterior walls never before had such masterful demonstration as Charles V. Turner has here given.

# A Play of Color Everywhere.

To produce the exquisite color effects of the Exposition, Mr. Turner procured from the architects small sketches of all buildings, from which models were made on the scale of

one-sixteenth of an inch to the foot. These were

A group over one of the four entrances to the Music Temple, by Isidore Konti, showing the blind bard with the lyre, and over him a winged female figure carrying the laurel branch, the whole expressing the conventional idea of heroic music.



grouped upon a platform 12 by 16 feet, according to the plan prepared by John M. Carrère, to whom was entrusted the arrangement of the ground plan of the Exposition. Each model was colored according to the general scheme and its relationship to surrounding buildings was studied. Even the color of the sky, the grass and flowers, the pools and fountains, was taken into consideration. Many of the models were painted several times before the proper color note was hit upon to complete the harmony. When the perfection that had been sought had been secured, drawings to the last detail were made, to be placed in the hands of the intelligent painter-decorator. The color scheme follows the plan of the sculptural embellishment conceived by Mr. Bitter and executed under his direction. As the sculpture symbolizes the progress of the race, the color scheme represents in epitome the growth of the color sense. From the warm, rich colors in the southern part of the group, the scheme leads up to the refined tints which culminate in the Electric Tower. The color as applied to the Charles Y. Turner, principal buildings may be noted as follows: Horti-Director of Color, culture—orange with details in brilliant blue, green, rose and yellow. Government—yellow, with details in primitive colors. Temple of Music — red. Machinery — greenish gray. Restaurant group—ivory, accented with green and

gold. Electric Tower—ivory, yellow, gold and green. The roofs are generally of red tile, though prominent towers and pinnacles are in many cases decorated with green, blue green or gold. All buildings have a play of color about their entrances, balconies, pinnacles and towers. "My idea," says Mr. Turner, "is to have the sharpest and freshest green known carried throughout the entire scheme, and that will be my reference to power."

#### An Enchanting Water Scene.

The central feature of the Court of Fountains is the great pool, with its numberless dancing spurts and cascades of crystal fluid, its statuary and richly fashioned balustrades and plastic ornaments, its sculptured groups and surroundings of blossoming parterres. The central pool and its fountains at night receive a special illumination. This illumination is accomplished by means of floating lights, which look like stars upon a bit of inverted sky. The entire court is brilliantly lighted. Not only are the buildings all aglow with incandescent bulbs, but richly modeled posts are everywhere, carrying from

25 to 100 lights. There are 2,800 of these posts throughout the grounds: they line the banks and balconies of the Grand Canal and Mirror Lakes, they border the gardens and pathways, and their clusters of bulbs impart a diffused light, resembling that of day.



The Electric Tower, designed by John Galen Howard, is 409 feet high, and is the architectural centerpiece of the Exposition. It stands in the center of a great basin. The main body of the Tower, to a height of nearly 300 feet, is 80 feet square. The crown of the Tower is of diminishing proportions—first, four open pavilions at the corners, with loggias between, then a circular colonnade with winding stairway leading up to the cupola and lantern. Curved colonnades, 110 feet high, extend from the base of the Tower on the east and west sides, and form a semi-circular space, 200 feet across, upon the south side. In the southern face of the Tower is an arched niche, 75 feet high, from which gushes a veil-like cascade. All about the base of the Tower are other fountains and water effects. The water features and the Tower are brilliantly illuminated at night by means of invisible searchlights of great power. The Tower is used for searchlight signalling at night, the signals being answered from the great Observation Tower at Niagara Falls, 15 miles away. The Tower is also used for restaurant and observation purposes, and it is thickly studded with electric lights, in consonance with the general plan of brilliant illumination of all buildings.

# A Tall Beauty is the Tower.

John Galen Howard fashioned the model for the Electric Tower and a thousand men built it. It is 400 feet high, and the winged Goddess of Light who has momentarily stepped her right foot upon its pinnacle is as comely a lass as ever soared so high. The main body of the Tower is 80 feet square and the columinated wings at its base are 110 feet high. The elaborate plastic detail, the ornamentation of sculpture, the veil-like cascade bursting from the wide niche in its southern face, combine with the graceful proportions of the Tower to give it place as one of the noblest of man's creations. It stands in a broad pool and numerous water features enliven the scene. The Tower is provided with elevators, which carry visitors to

floors at various heights. At an elevation of 110 feet are a restaurant and roof garden, from which one may obtain commanding views of the Court of Fountains to the southward and the Plaza at the north.

#### Places of Music and Mirth.

Let's leave the Tower for a little while, for we shall want to



#### THE TEMPLE OF MUSIC

at the northwest corner of the Court of Fountains and Esplanade, is a center of interest for music lovers. The temple is very beautiful in its exterior aspect and contains an auditorium seating 2,200 people. Emmons Howard has installed a great pipe organ at a cost of \$15,000, and this is the place for orchestra, vocal and organ concerts and recitals during the Exposition. It is also a meeting hall for other purposes. The building is from designs by Esenwein & Johnson, of Buffalo. The decorative groups of sculpture are by Isidore Konti.



return often to its vicinity. This is the Plaza, next north of the Tower. In its very center is a large pagoda of ideal beauty and proportions. It stands in the center of a sunken garden surrounded by a balcony and other pagodas, and the place is ornamented with sculptures. Here the most famous bands of the Western World are playing their choicest selec-



tions to delighted multitudes. Upon the northern boundary of the Plaza are two towered monumental entrances leading to the Exposition from the great rail-way station. They are connected by a curved colonnade, 400 feet long, decorated with brilliant colors and statuary, and forming a screen, shutting out the smoke and noise of trains. The structure is known as the Propylea. The Plaza is always gay, for npon its eastern side is the entrance to the Stadium, the place of athletic events, pageants and formal ceremonies, and upon the western side is the entrance to the Midway, with its wonderful variety of unique entertainments.

# When the Dinner Bell Rings.

Frederic W. Taylor has been mindful of the material needs of Exposition visitors, and, upon his suggestion as Director of Concessions, several different forms of restaurant features have been provided, intended to satisfy every want and every purse. Two of the largest restaurants are those in the two

entrance buildings of the Stadium and Midway. The buildings themselves are gems of architectural beauty and decorative effort. They are companions in size, form and color, each having two graceful towers at either end, tall and exquisite in modeled detail. An arcaded arrangement of the ground floor permits the multitude to pass freely to and fro, and broad staircases in the towers lead up to



PAN WITH AMOR.

This is a reproduction of an antique sculpture and stands in the eastern end of the Propylæa. In Greek mythology, Pan was a woodland spirit, and god of hills and woods, flocks and herds. He is represented as horned and goat-footed, playing on his pipes. The prefix "pan" is from the Greek word "pas," signifying "all," and has no apparent connection with the god Pan.

the spacious dining rooms, where hundreds may find attractive accommodations for leisurely feasting. Other restaurants are in the Model Dairy Building, east of the Agriculture Building, and in two special Restaurant Buildings, one of them east of the Manufactures and Liberal Arts Building, just across the Grand Canal, the other upon the South Midway, west of the Horticulture Building. The Mirror Lake pergolas also have restaurant arrangements, and there is a large restaurant building upon the Midway

next west of the Johnstown Flood.

The major restaurant concession is controlled by the Bailey Catering Company, under the personal management of Fred J. Bailey. It is calculated that 6.000 people may dine at one time. In a large headquarters building at the north end of the grounds, with railroad shipping facilities, the company has a refrigerating plant, steam laundry, ice-cream factory, steam bakery, a large restaurant for emplovees of the Exposition, and extensive storehouse accommodations. About 1000 persons are



Architecture about the Plaza: Restaurant Building, entrance to Midway, on the right. employed in the restaurant service of this company, besides those employed in the smaller Midway restaurants and fruit stands.

#### A Lesson in Navigation.

I hope we have been thoughtful enough to rest before this. The Exposition has provided seats for 20,000 pilgrims, such as you and me, and we must show our appreciation at least. I have in mind now a trip to the State and Foreign Buildings, south and east of the Mirror Lake. There are three ways of getting there without much walking. We may take the Miniature Railway from near the big railway station and

transfer across the Mall at the east gate to the other line, paying two fares; we may take a wheel chair; or we may go via the Grand Canal,



Illumination of the Machinery and Transportation Building.

in a gondola or electric launch. We will choose water this time and get aboard the craft in the basin at the base of the great Electric Tower. We glide under the beautiful arched bridges, with their brilliant illuminations of electricity, skirt the Agriculture Building on two sides, pass the Dairy Building, and go thence under the Mall, following along the east side of the Manufactures and Liberal Arts Building. The Live Stock Exhibit Buildings are on our left. We now turn east again and go around the eastern side of the United States Government Buildings to another turn in the Canal, where we may step ashore.



#### TORCH BEARER.

There are two statues entitled "Torch Bearer," both by Philip Martiny, for niches in the Electric Tower. Both are female figures. One holds in her right hand a torch and in her left a coil. The other holds in her left hand a torch and in her right a magnet. The figures express the idea of light and electricity.



Ghost Dancers.

#### Some Tame Indians in Wild Attire.

A century of contact with civilization has tamed the Indian and he now joins the white man here to produce an exhibit of genuine interest. Near at hand is the stockade built by the Indians of the Six Nations, from material brought by them from their reservations in Western New York. The exhibit is that of the pagan Indians, showing the manners, customs, domestic utensils and weapons used by their ancestors 500 years ago.

The Forestry Building stands a few rods west of the Indian Stockade, and a little farther beyond is a group of prehistoric Indian mounds. One of these is a full size burial mound, showing the manner of construction. The others are miniature reproductions of the famous serpent and eagle mounds.

# Other Interesting Buildings.

The building devoted to the Maccabees is just north of the mound. To the south is the Ecuador Building, and beyond that the group of Ordnance Buildings, with a great gun in a Gruson turret mounted between. Going still further south we come to the Fine Arts Building, a large, fire-proof structure, filled with paintings and sculpture of American production. Retracing our steps, and following along the broad roadway west of the Ordnance group, we find, a little way to the northward, the New England Building. Other buildings near by are those of Chile, Santo Domingo, Cuba, Honduras, Michigan, Minnesota, Illinois, Wisconsin, Ohio and others. The Ancient Order of United Workmen have a headquarters building pleasantly situated. Crossing the lagoon, west of the Ohio Building, and noting the water gardens as we go, we traverse the Forecourt and come to the rose gardens. A large space is devoted to the exhibits of roses, hydrangeas, and many thousands of outdoor plants and shrubs of every name. The Women's Building is in the midst of this floral loveliness. The New York State Building, which I have already mentioned, resembling a Greek temple in solid marble, stands upon the bank of the North Bay. In the very center of the bay an electric fountain has been constructed, which constitutes one of the most beautiful spectacles each evening at the

Exposition. If we continue northward we come to an exhibit building devoted to certain features of the Graphic Arts display. This is on the east side of the South Midway, west of the Horticulture Building. A few rods beyond it is a large restaurant where we shall find rest and refreshment.

#### THE MIDWAY:

Esquimau Village, National Glass Factory, Trip to the Moon, Thompson's Aeriocycle, Captive Balloon, Old Plantation, Beautiful Orient, Miniature World's Fair, Around the World, Cleopatra, Colorado Gold Mine, Living Pictures, Dreamland, Moving Pictures. War Cyclorama, Philippine Village, Alt Nuremburg, Panopticon, Streets of Mexico, Darkness and Dawn, Darkest Africa, Burning Mountain, House Upside Down, Wild Water Sports, Gipsy Camp, Golden Chariots, Johnstown Flood, Bazar Building, Infant Incubators, Scenic Railway, Fair Japan, Venice in America, Bostock's Wild Animals. Spectatorium-Jerusalem, Indian Congress, Dawson City, Ideal Palace, Miniature Railway,



#### A THREE-MILLION DOLLAR MIDWAY.

This birdseye view of the Midway is from a point above the eastern entrance, showing about one-third of the length of this interesting amusement section. The total length of the Midway is about 3,000 feet, giving over a mile of frontage. It is the largest and finest feature of the kind-

# Strolling Through the Midway.

What noisy fellows those are, standing in front of the amusement places and calling out in strange accent the category of wonders to be seen just within—just beyond our scrutiny! Here is a business street—the strangest in the world—where all business is pleasure. Shall we take the Midway features in their order, beginning at the main entrance? This is the Esquimau Village, with its strange huts, its dogs and sledges, and odd games played by natives from the Arctics. A Glass Factory, showing the processes of making articles of glass, stands upon an adjoining lot.

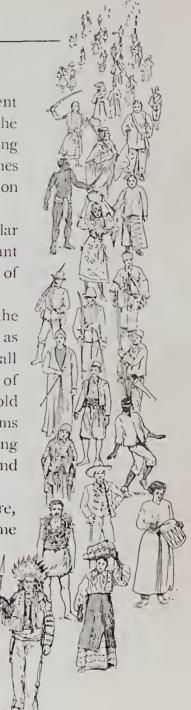
"All aboard for the Moon!" The air ship Luna waits at her dock! "All aboard!" A wonderful spectacular illusion is this, originated by Frederick Thompson. We may ride sky-high in the Thompson Aeriocycle, a giant teeter, if we will, or go up in the Captive Balloon. If we go into the Old Plantation we may have a glimpse of the Sunny South, with its negro cabins and its cotton fields, and listen to the negro melodies.

Hi, there! Look out or you may be stepped on by the camels! A procession from some ancient city of the Beautiful Orient shambles by. Those who did not go to the World's Columbian Exposition at Chicago, as well as those who did, may visit or revisit that famous scene in miniature, for here is the great "White City" again in all its magnificence, the guest for the season of the "Rainbow City." "Cleopatra" is a representation, by means of life-size paintings, of important events in the life of the Egyptian queen. A great sectional model of a Colorado Gold Mine in operation, showing methods of mining, illustrates impressively and graphically the engineering problems connected with that industry, and gives one a new understanding of this work. A glance at a variety of moving pictures in slot machines and we move on. A Trip Around the World is here made quickly. The strange and wonderful sights to be seen in encircling the globe are exhibited in a most entertaining and instructive manner.

A colossal head upon a pillow as large as a big house bears the sign "Dreamland." We have all been there, but not so wide-awake as now. It is a place of singular and interesting illusions. Hours may be spent in some of the Midway entertainments, but you may return to these at your leisure without my guidance. We are learning more and more to appreciate the cineograph, and Mr. Lubin has here a most interesting

exhibition of living pictures.

The Battle of Missionary Ridge, the battle above the clouds, is shown in a mammoth cyclorama, with surprising fidelity to detail. Inasmuch as the Philippine Islands belong to Uncle Sam's



domain we have a new interest in the Filipino Village here presented, showing the native in his home and amid his natural surroundings. Old Nuremburg is a very large representation of a German village, and stands on the Midway and the Mall, the latter being the main thoroughfare from east to west across the Exposition Grounds, separating the Electricity from the Ma-

chinery and Transportation Building, and the Agriculture from the Manufactures and Liberal Arts Building.

# Making Business of Our Pleasure.

We have visited but one side of the Midway thus far, and in order to proceed with system let us return to the eastern entrance and take the other side. Under the name of Panopticon, a great museum of wax figures, probably the largest collection of the kind ever displayed, has first place on the left.

A glance through the Streets of Mexico invites us to a further examination. A bit of Mexican life and activity has been transplanted here for a season-

shops, theater, dancing hall, restaurant, arena, plaza, cathedral and all. An adobe village and prehistoric cliff dwellings are among the features.

"Darkness and Dawn" is a spectacular representation of Dante's Inferno, with elaborate electrical effects, and is a song and sermon in one. In these wilds of Darkest Africa, with the funny huts, one may readily imagine himself

with Stanley in Africa. The crater of the volcano of Kilauea, the burning mountain of Hawaii, is reproduced upon the cyclorama plan with ingenious electrical effects to complete the illusion. Roltair's odd conceit, a House Upside Down, compels a laugh, but the more amusing part by far is within, where everything and everyone seems topsy-turvy. Palst is next in order.

Wild Water Sports is an imported novelty, including a water pantomime with many performers, a chase with hounds and thoroughbreds, the famous diving elks which jump from a high cliff, and other features. Next



door is the Camp of Royal Gipsies, with fortune tellers and a theater attended by gipsy performers.

Bostock's Golden Chariots are upon the corner where the Midway turns again to the eastward. A novel and interesting entertainment awaits within. The Johnstown Flood is a scenographic reproduction of the great flood that swept away 5,000 lives. The presentation of this will make clear to many minds just how the great calamity occurred.

# Midway South of the Mall.

The Midway is about 3,000 feet long, giving over a mile of frontage, all closely built and devoted to the great collection of amusement features. At the corner of the Mall and the South Midway is the Infant Incubator, where

infants of the human kind are nursed from immature weakness to a condition of robust health. This is of genuine scientific as well as popular interest. Charles D. Arnold's photograph building has a prominent place on the opposite corner. He is the official photographer. The Scenic Railway and Rivers, Dawson City and the Ideal Palace are near at hand.

Fair Japan is illustrated by means of a Japanese Village, in which the village folk occupy themselves with their every-day trades, doing everything in a manner new to those of us who have not traveled among them. Venice in America is a reproduction, upon a small scale, of famous buildings and features of the real Venice. A branch of the main canal which surrounds the Exposition buildings cuts through the American Venice, so that the approach may be by water.

Frank C. Bostock's great Arena of Trained Wild Animals, one of the most interesting of the many entertainments, occupies a large space here. The great Spectatorium of Jerusalem on the Day of the Crucifixion, and the Indian Congress of 42 Tribes, a wonderful collection of aborigines, complete the grand list.





#### FOUNTAIN OF KRONOS.

For the western wing of the Esplanade. By F. Edwin Elwell. In the Fountain of Kronos Mr. Elwell portrays the God of Time standing on the back of a turtle, suggesting the slowness of time, while its swift flight is represented by a vigorous forward movement in the outstretched body and winged arms. There is the suggestion of an aged countenance through the veil, which typifies the mystery of time. The spheres in the hands represent the movement of time from sphere to sphere. Around the god in the water are figures of moose-fish, creations of the sculptor's fancy.

# Fancy Fruits and Finest Flowers.

The beautiful building devoted to Horticulture was designed by R. S. Peabody, of Boston, and its size and situation give it special prominence in the magnificent group of Exposition structures. It is 220 feet square and its great dome carries a lantern at a height of 236 feet. In addition to the grand central dome there are four smaller domes at the corners. Upon the four façades are recessed arched entrances of beautiful design and rich in color decorations.

The Division of Horticulture is under the supervision of Frederic W. Taylor. The exhibits are divided into three subdivisions—pomology, floriculture and viticulture. The pomological exhibits consist of apples from cold storage the entire season, many varieties of pineapples from Florida, fresh dates of American growth from Arizona and California, oranges, lemons, limes, pomeloes and other citrus fruits; tropical fruits from Porto Rico, preserved fruits from Hawaii, cranberries growing in the natural bog soil, prunes and cherries from the Pacific States, Japanese persimmons from the Gulf States, peaches from all sections, grapes of New York State and California.

The Sub-Division of Floriculture is in charge of William Scott as assistant. In addition to the exhibits in green-houses which flank the Horticulture Building on the north and south,





several acres are devoted to hundreds of beds of favorite flowers south of the Horticulture Building. These exhibits include hardy and exotic water plants, extensive display of newest and best cannas, 5,000 hardy roses, 2,000 summer blooming roses, several thousand geraniums (new varieties), 5,000 herbaceous plants, 5,000 dehlias from eminent specialists, 20,000 summer blooming plants best suited for this climate, hardy shrubs, conifers or evergreens, hardy trees, 150,000 spring flowering bulbs, several beds of the new Spanish iris, clematis and other hardy climbers.

In the Horticulture Building there will be a continuous display of flowering plants, groups of palms and other decorative plants, ferns, exhibit of cut carnations, early in May; tender roses and peonies, end of May; hardy roses, end of June; sweet peas, end of July; gladiolus, early August; asters, end of August; dahlias, middle of September; chrysanthemums, end of October.

A very attractive feature of the floricultural display is the water gardens upon the southern shores and in the lagoons of the Mirror Lakes. Some very rare and beautiful specimens are shown in specially heated pools. In the Sub-Division of Viticulture are shown the vine and its varieties, by living specimens, cuttings, engravings and photographs; table, raisin and wine grapes.

#### FLORAL WEALTH, By Bela L. Pratt of Boston.

This group, for the west wing of the Esplanade, typifies the bounty and the beautiful products of Nature, such as are illustrated in the Horticulture Building, in front of which this piece of statuary stands.

# The Arts Preservative of All Arts.

We are all newspaper people, actively or potentially. In no country on earth are there so many newspapers and other publications to keep one's faculties alert and his mind in touch with all the world. The Graphic Arts Division is, therefore, of deepest interest to everyone who admires the beautiful

in printing, or appreciates the importance of time-saving and labor-saving methods in the publication of our daily newspapers. The recent progress in graphic arts has been maryelous indeed.

The Graphic Arts Division comprises
two sections, and the exhibits are made in the
"Gallery" and "Workshop," in separate buildings.
The term "Gallery" is used in the same sense as it is
employed in reference to an art gallery, which it is, in
fact, inasmuch as the most artistic productions of the
printer's art are herein displayed.

The building in which the Graphic Arts Gallery is situated is one of the group of three beautiful structures at the western end of the Esplanade. It is west of the Temple of Music, south of the Machinery and Transportation Building, and a conservatory stands between it and the Horticulture Building. The building is 150 feet square, almost the exact counterpart of the Mines Building, having four corner towers with lofty pavilions, and the modeled relief work and color decorations combine to make an exquisite picture. It was designed



by R. S. Peabody of Boston, architect of the group.

The Graphic Arts exhibit illustrates the progress and the high state of perfection of printing and allied trades. The division is under the superintendence of Thomas M. Moore, with Richmond C. Hill as assistant.

The exhibits in the "Gallery" include specimens of lithography, zincography, aluminumography, photogravures and color prints from photo-engraved plates, and engravings made from steel, copper or other metallic plates; a fine collection of photographs prepared for reproduction by the photo-engraving process; printing inks, bookbinding and paper of every variety. There are also several models and pictures of machinery relative to the printing and paper-making industries.

In the "Workshop" are the latest machines for printing, engraving, stereotyping, type-setting and type distributing in operation. Machines for paper and card cutting, embossing, numbering, perforating, wire stitching, ruling, etc., are also shown. The most important features of the display in the "Workshop," however, are the printing presses in operation. These illustrate the remarkable progress made in this class of machinery, a progress at least co-equal with that made in any branch of mechanics. The exhibit includes the very latest and best machines for newspapers and job printing, and for printing from stone and aluminum plates, which latter are being pushed vigorously as competitors of stone.



THE ARTS. By Chas. L. Lopez.

This is a group in the Court of Fountains, in front of the Manufactures and Liberal Arts Building, and it has a companion group called "The Sciences." In "The Arts" Minerva, as the patroness of the arts, occupies the main position of the group. Seated upon a throne, she holds in her left hand a staff. The right arm is resting on the sweeping curve of a classic chair. She is robed in Grecian draperies, and her shield, on which is the head of Medusa, is beneath her sandaled feet. The emblems traditionally associated with the Goddess of Wisdom—the owl, serpent, laurel and oak—are seen in the surroundings of the figure. "Sculpture and Painting" are represented in this group by one figure, that of a youth seated, his left hand holding a pallet carelessly thrown across the lap of Minerva. In his right hand he holds a small Victory, which he is studying. A young girl representing Lyric Poetry holds in her right hand a lyre.

# A Grand Season of Athletics.

The Stadium at the Exposition will be the place of an almost continuous carnival of athletics. The program is as follows:

Friday, May 17—Cornell-University of Michigan base-ball game.

Saturday, May 18—Erie County track and field games.

Friday and Saturday, May 24 and 25—New York State Interscholastic track games.

Friday and Saturday, May 31 and June 1—Pan-American Intercollegiate track games.

Monday, June 3, to Saturday, June 7—School boys military tournament.

Saturday, June 8—Cornell-Carlisle baseball game.

Thursday, June 13 to Saturday, June 15—A. A. U. championships.

Monday and Tuesday, June 17 and 18-A. A. U. basketball championships.

Saturday, June 22-Western New York track meet,

Monday and Tuesday, June 24 and 25—Canoe meet. Thursday, June 27—Volksfest (German singing societies). Friday and Saturday, June 28 and 29—Scottish games.



#### THE STADIUM.—A GLORIOUS ATHLETIC ARENA.

The Stadium for sports is only a few rods north of the Agriculture and Dairy Buildings. It is the most magnificent arena for a like purpose ever erected in America. The seating capacity is 13,000. It contains a quarter-mile track and abundant space for all the popular athletic games and sports. The architectural adornment is very simple and beautiful, giving it an aspect of massiveness and durability. The arrangement is that of a vast amphitheater, the seats being under cover and affording comfort to the spectators, The main entrance is a large building whose upper floor is used for restaurant purposes. The architecture is very picturesque and appropriate. While the Stadium was designed primarily for athletic and sporting events, it is intended also for the parade and judging of live stock, and for the exhibition of farm and road machinery, traction engines, automobiles and other vehicles in motion.



Monday, July I to Wednesday, July 3-Canadian-American Lacrosse championships.

Thursday, July 4-All-round A. A. U. championship and handicap events; Marathon race.

Saturday, July 6-Exhibition by German V. M. C. A.

Wednesday and Thursday, July 10 and 11—Interscholastic basketball. Friday and Saturday, July 12 and 13-National Interscholastic track and field games.

Monday, July 15 to Saturday, July 20—Shooting meet.

Tuesday and Wednesday, July 23 and 24-National Y. M. C. A. track and field games,

Friday and Saturday, July 26 and 27-Metropolitan meet, A. A. U. Monday and Tuesday, August 5 and 6-Bicycle meet and national amateur championship,

Wednesday, August 7 to Saturday, August 17-Bicycle meet. Thursday and Friday, August 22 and 23—Firemen's tournament.

Saturday, August 24—A. A. U. gymnastics.

Wednesday, August 28 to Saturday, August 31—Irish sports.

Monday, Sept. 2 to Thursday, Sept. 5-Association football.

Friday, Sept. 6th—Pan-American world's championships, cross country run.

Saturday, Sept. 7—Pan-American world's championships. Monday, Sept. 16 to Saturday, Sept. 21-Automobile week.







CHARIOT RACE. By F. G. Roth.

This is the first piece of statuary seen by the visitor after passing through the Elmwood Avenue gate, near the New York State Building. It shows an antique chariot swinging around the "meta," or post of the arena. The curve is rather short, as the leaning of the horses and chariot indicates. The driver, balancing to the swing of the motion, restrains the horses on the inner circle, while the horses on the outside have to do their best to keep up with the pace.

Mr. Roth is one of the younger American sculptors. His specialty is animals. He has had much success in portraying these subjects, and has several groups of this character



#### SOUTHERN ENTRANCE, ELECTRICITY BUILDING.

The Electricity Building is 150 by 500 feet and was designed by Edward P. Green of Buffalo. While a very beautiful building as a whole, it has some particularly interesting and attractive features, notably the southern towers, the northern entrance, and the colonnades and loggias on the southern side. It stands on the north side of the Mall, west of the Electric Tower. The architect has overlooked no opportunity to secure rich decorative effects.

# The Wonders of Electricity.

The visitor will very naturally expect to see some wonderful things among the multitude of electrical exhibits. In this he will suffer no disappointment, for the whole electrical field has been gleaned by experts, and the fruits of their research will supply, in ample quantity, food for study and contemplation. Prof. George Francis Sever, of Columbia University, New York, is Superintendent of Electrical Exhibits, and he has had placed at his disposal a multitude of electrical machines and appliances from which to make up his splendid display. The classification includes apparatus for demonstrating the phenomena and laws of electricity and magnetism; apparatus for electrical measurements; primary and storage batteries, electro-plating and refining processes, industrial electro-chemical processes and appliances; are and incandescent lighting, regulating and controlling devices; telegraphic transmitters, receivers, recording apparatus, multiplex apparatus, synchronous telegraphic apparatus; telephone transmitters and receivers, switchboards and appliances, safety devices; dynamos for producing direct and alternating currents, apparatus for the transmission of electric energy, alternating current transformers and motor-dynamos; electric railway apparatus: motors, wires, cables, etc.; electro-therapeutics; electric welding and heating apparatus; signals and clocks.

In the Electricity Building the following may be noted as of particular interest:

Historical exhibit of electrical apparatus and railway motors Niagara Falls transformer plant receiving the current at 11,000 volts and stepping it down to 1,800 volts.

Models of Niagara Falls power station in operation.

Magnificent telephone display—probably greatest ever made at any Exposition—including a complete working plant.

Construction and use of underground and submarine cables. Complete water-power plant in miniature, showing all

details from water to utilization of current.

Gas engines operating large generators.

Latest electrical therapeutic apparatus and X-Rays.

Wireless telegraphy.

Latest and most complete electric light fittings.

High-speed telegraphy.

With good reason, perhaps, many people have become impressed with the idea that the application of electricity to cooking is not a success. This is owing to the fact that in the early stages of this use of the

proving satisfactory when purchased by the people, has given a wrong idea as to the service and usefulness of the electric current in this field. The incorrect ideas that the public have thus acquired will no doubt in a very large degree be corrected by the exhibit in the Electricity Building, where everybody will have the opportunity to learn of the highest stage of the art of cooking by electricity. There is little doubt that the Exposition will prove an important educator in



#### ARTIFICIAL THUNDER AND LIGHTNING.

The electric sign, "Niagara," is one of the Exposition novelties. It is produced by means of a very powerful current and the shafts of lightning, as they cleave the air, produce the sound of thunder in precisely the same manner, but with less force than the familiar summer-time phenomenon. These results were secured after long and patient experiment with the heavy current in the great power house at Niagara Falls,

many ways, but pos-

sibly in no field to a greater extent than in portraying the general usefulness and adaptability of the electric current and particularly its application to domestic purposes.

#### The Struggle for Civilization.

Dr. A. L. Benedict, superintendent, has prepared a surprise for us in his ethnology and archæology exhibits. Sermons in bones, books in burial nooks, and food for thought in every specimen! The archæologist of to-day is a Sherlock Holmes in science.

He reads the history of a race in its pottery, its arrow and spear heads, its copper implements, its buried charcoal, the leavings of some camp, ages ago. The social condition of prehistoric man is made known, not by his literature, but by the language of his implements of war, his utensils of peace and his burial

customs which have survived the erosion of ages. The splendid collection here gathered is rich in revelations of the lives of the early inhabitants of the Western World. The classification under prehistoric archæ-

ology includes mortuary customs, graves, mounds, dwellings, sculptures, domestic animals, methods of manufacture of chipped flint implements, pottery, bone implements, etc. The exhibit of prehistoric relics is very complete.



#### ETHNOLOGY BUILDING.

Architect George Cary, of Buffalo, has designed a heautiful building for the Ethnology and Archæology exhibits. It is circular in form and 150 feet in diameter. The roof is a great dome, richly ornamented, and above the four main entrances are dashing quadrigas. An important feature of the building is the exterior terrace or promenade upon the roof outside the circle of the dome. The corner entrances are stately in design and splendid in their color decorations. The situation of the building, upon the corner of the Esplanade and Court of Fountains, gives it special prominence.

Stockade and Iroquois Village, Six Nations Indian Exhibit.



INDIAN ON HORSEBACK. By Chas. C. Rumsey.

This equestrian statue was modeled by a Harvard University student and a resident of Buffalo, Mr. Chas. C. Rumsey. The poise of the Indian especially expresses the characteristics of the red man, and the whole conception of the piece is most original.

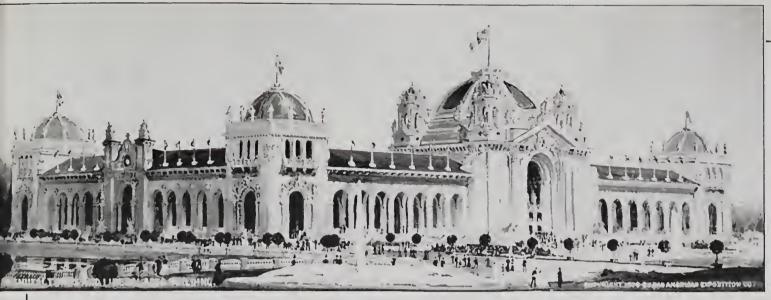
continent, including Alaska and British America. In addition to these portrayals of the institutions of the red man, there is the Six Nations Village, with seventy typical specimens of the Iroquois.

#### Six Nations Indian Exhibit.

Few people realize the power and prestige possessed by the Iroquois Confederacy in the days of its greatest strength. The Iroquois, or Six Nations, were the most powerful Indian Empire north of the Aztecs of Mexico, in the days when the white pioneers pressed their way into the unexplored wilds where now are the busy centers of trade and industry on the Niagara frontier and in Western New York. History tells much of the warfare which went on between the whites and the Indians during the two hundred years before the red men were forced to give way to the civilization brought by the whites from the Old World, and confine themselves to the reservations in New York State and Canada, where the remnants of the once powerful Iroquois are now to be found. Upon these reservations are the representatives in our own day of the Six Nations which made up the Iroquois League-the Mohawks, Senecas, Cayugas, Oneidas, Onondagas and Tuscaroras.

The Ethnology Building is filled with most interesting collections pertaining to the life and customs of the aborigines of America. These collections illustrate the civilization attained by the ancient Aztecs, and the customs of other aboriginal peoples of the





#### Western World Handicraft.

The exhibits in the Division of Manufactures include chemicals and drugs, paints and painters' supplies; soaps, toilet articles, essences and perfumery; traveling, camping and sporting apparatus; furniture and interior decorations: carvings and art metal work; ceramics and allied products; glass and glassware; burial appliances; heating, cooking and washing apparatus, and kitchen appliances; lighting apparatus and appliances; refrigerators; hollowware, tinware, enamelware; sewing machines; mineral fabrics; fabrics of glass; gold and silverware, jewelry, ornaments, watches, clocks, etc.; rubber and water-proof goods; woolens, cottons, linens, silks, furs, millinery; toys and barbers' supplies; paper, stationery and typewriters; leather and

manufactures of leather; scales, weights and measures; steel and wrought iron; vaults, safes, hardware, cutlery, edge tools and other implements; miscellaneous articles.

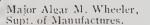
The Manufactures Division is under the superintendence of Major Algar M. Wheeler, who has secured many exhibits of special interest. Prominent among them are the following:

Extensive displays of silverware by leading manufacturers.

A great variety of sewing machines by prominent makers.

#### MANUFACTURES BUILDING.

The Manufactures and Liberal Arts Building is on the east side of the Court of Fountains, next south of the Mall, and is from designs by Geo. F. Shepley, of Boston. The Court of Cypresses is on the south and the Grand Canal on the cast. The building is 350 by 500 feet. and the architecture conforms to the general style of the Exposition, having many suggestions of Spanish origin. In the center of the building is a spacious glazed court in which has been arranged a large display of industrial art exhibits. Over the main entrance of the building, on the south, is a high dome, flanked by four square open towers. Broad steps between large groups of statuary lead up to the entrance, which consists of a high arch with two tall columns on either side. Above the arch, elaborate relief work enriches the gable. Statues symbolizing the various arts and industries are placed in niches at the angles of the several open towers around the dome. The towers may be reached by open spiral staircases, 17 feet in diameter. The interior of the dome is 70 feet across, and is encircled by galleries from which one may have good views of the crowds below. The several entrances and all the exterior work upon the building are of a highly ornamental character.



A booth made of glass.

A complete shoe factory in operation.

A pagoda constructed of pure aluminum.

A grass booth, displaying twine made of grass.

A huge refrigerator made of tile.

An extraordinary display of woolens.

Extensive displays of costly furs.

Large exhibits of corduroys, plushes and dress goods.

Looms manufacturing hammocks and mosquito netting.

A machine manufacturing watch chains.

Extensive exhibits of cash registers with stereopticon views showing their construction.

Very large exhibits of American pottery by the leading pottery firms of the country.

The Gloucester Fishery Exhibit brought from Paris.

A great display of the industries of Mexico.

Display showing the process of manufacturing watches.

Machines manufacturing badges of various kinds.

#### Liberal Arts Exhibit.

One-fourth the space in the Manufactures and Liberal Arts Building—the northeast corner—has been set apart for the Liberal Arts exhibit. Dr. Selim H. Peabody, who was Superintendent of Liberal Arts at the World's Columbian Exposition at Chicago, and who is an eminent educator, is superintendent here. Of special interest and importance are the following:

Educational exhibit, including contributions from leading universities, colleges, technical schools, art schools, public and private schools, etc. Library exhibits. Models and plans of school buildings.

Models and plans of tenement houses, defective and improved.

Exhibits of board of health, of charity organizations and of various methods of social economy.

Models of public works, as the Nicaragua interoceanic canal, the Chicago drainage canal, parks, sewage, and transfer system of Boston.

Exhibits of insurance.

Exhibits of sanitary manufactures, bath-tubs, closets, bathrooms, etc.

Medical and surgical apparatus, instruments, operating tables, etc.

Scientific apparatus — microscopes, telescopes, field and engineering instruments, drawing instruments, maps and globes, machines for voting, calculating, making change, etc.

Band musical instruments, violins, guitars, banjos, musical boxes, mechanical organs, accordeons, flutes.

Pianofortes and pianoforte players; pipe organs and cabinet organs.

Photographs, photographic apparatus and supplies. Publishers' exhibit—books, magazines, bibles, etc.

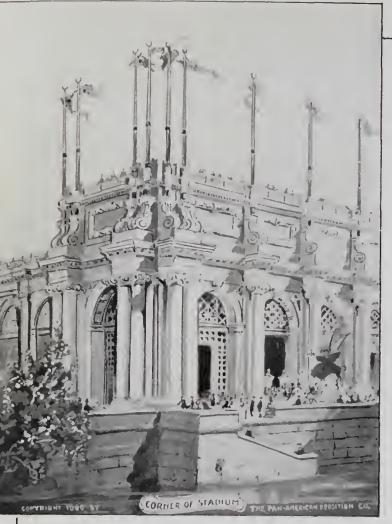


CROWNING FIGURES for the FOUNTAIN OF NATURE.

By George Brewster.

This fountain is in the western end of the Esplanade. The female figure, representing Nature, holds aloft the sun. At her feet are cherubs on clouds; beneath them, scated upon a globe, are figures representing the elements.

Dr. Selim H. Peabody, Superintendent of Liberal Arts.



A special section of the Liberal Arts exhibit is devoted to Hygiene and Sanitation. Dr. Jacob S. Otto is the assistant in charge of these very interesting exhibits, which relate to physical culture and apparatus therefor, hospitals, boards of health and their functions, the chemistry, preservation and adulteration of foods, mechanical methods of sanitation, and sanitary architecture.

# Agricultural Machinery and Appliances.

The fact that the United States have become such large producers of agricultural machinery for the world at large has resulted in the allotment of a special division to this class of machines and tools. The exhibit, which has been housed in the exhibit space under the amphitheater of the Stadium, includes implements, machines and tools for breaking, stirring and pulverizing the soil, fertilizing, sowing and planting; for the protection of growing and standing crops and harvesting, storing and preparing them for market. It also includes machines for repairing and building roads, the construction of fences, with samples of gates and posts; machines, appliances and methods for raising, storing and applying water for agricultural purposes; irrigation and drainage machinery, appliances and methods; engines and machinery for developing and transmitting power for farm uses. The exhibit of special machinery is important, relating to the cultivation and harvesting of sugar cane and the sugar beet, cotton, flax and other fibrous plants, and for the manufacture of sugar, molasses and starch. Thomas M. Moore is superintendent.

# American Artists Have No Old-World Competition Here.

The Fine Arts Building, 221 by 106 feet, is fire-proof and has an attractive site in a beautiful grove, 1,100 feet south of the Government Buildings. For the first time at a great exposition, American artists are without the competition of old-world masters. William A. Coffin, the eminent art critic, is superintendent.

## Marvels in Machinery.

The very great improvement in machinery during the last few years has made possible exhibits in this division that are of deep interest to every one who is concerned in the improvement of machines in general. The exhibits include engines and motors driven by air, gas, gasoline, oil, steam and water; pumping machinery and implements for compressing air and gases; apparatus and means for controlling, conveying and measuring air, gases and liquids, such as pumps, pumping engines and meters, filters, blowers, blowing engines, ventilating apparatus and appliances, hydraulic presses, piping and tubing, pipe fittings and appliances; pneumatic machinery.

Another group includes fire engines, hose, hose carts, water towers, stand pipes, fire ladders, fire escapes, chemical engines, extinguishers and appliances; machinery for special industries, such as spinning and weaving appliances, felt and

rubber goods, leather-working machinery and sewing machines; machines and tools for working metals both cold and hot; machinery for working wood, such as circular, band and jig saws; planing, molding, tonguing, grooving, shaping and mortising machines; turning, boring, curving and stamping machines; veneering, sanding and polishing machines; barrel, cask and box making machinery; special machinery and appliances for working cork, ivory and vegetable ivory.



## MACHINERY AND TRANSPORTATION BUILDING.

One of the first of the large buildings to be completed was that devoted to Machinery and Transportation exhibits. This building is 500 by 350 feet and is situated on the west side of the Court of Fountains. On the north is the Mall, on the west the Grand Canal, and on the south the Court of Lilies. It is from plans by Edward B. Green, of Buffalo, and the style of architecture is that of the Spanish Renaissance, with very elaborate detail. There are twin towers on both the north and south sides, very delicately molded and graceful. In the center is a covered court devoted to pumping machinery, supplying more than 30,000 gallous per minute to the various fountains and cascades upon the Exposition grounds.

Under the head of miscellaneous machinery are shown all kinds of special machines, such as those for drawing and expanding metal; factory and mill machines, rolling mill appliances; forges and heating furnaces; wire and cut nail, spike, horseshoe and horseshoe nail machinery; hand tools for shop use; crane machinery for handling heavy material; machines for weaving wire; machines for making pins, needles, hooks and eyes, buttons, clocks and watches, jewelry; laundry machinery; bottling and corking machinery; machines for painting, sanding,

rubbing and polishing. Another class of machines includes those for making brick, tile, pottery and artificial stone; grinding, polishing, engraving and etching glass; sawing, planing, dressing, shaping and polishing stone. Thomas M. Moore is superintendent.



# Road Vehicles and Vessels.

The exhibits of vehicles other than those for railways are shown in the Machinery and Transportation Building, under the superintendence of Thomas M. Moore. They include bicycles and multicycles; vehicles for farm use, city delivery, pleasure, speeding, public vehicles; ambulances, hearses; harness and saddlery; vehicles operated by electricity, steam, gas or gasoline, compressed air; sleighs; passenger and freight elevators for buildings, etc. The exhibit of vessels is also made in this building and includes those propelled by man or animal power, sails, steam or other engines or motors. The exhibit also embraces wrecking and diving apparatus, and includes models, drawings, descriptions, specifications, photographs, paintings and complete apparatus.

# Equipment for Luxurious Travel.

The exhibits of railway trains and equipment are installed in a long building, in the Mexican-Spanish style of architecture, at the northern end of the grounds. The western end of the building is used for the steam railway station. The railway exhibits occupy about two-thirds of the building, in which six tracks have been installed for the accommodation of model trains, locomotives, etc. The wall space of this portion of the building is used by the various railway companies for the exhibition of scenic photographs, and other illustrations of points of special interest along their respective lines.



# The Mineral Kingdom.

The Mines Building is 150 feet square and is one of the splendid group at the western end of the Esplanade, designed by R. S. Peabody, of Boston. It is the southernmost of the group, and has a picturesque situation on the Grand Canal and one of the Mirror Lakes. Dr. David T. Day, of the United States Geological Survey, is the superintendent, and has sought to show in compact form the marvelous resources in minerals of Pan-America. The principal features of interest are:

The natural history of gold, including the two largest nuggets found in the West.

The precious stones of North and South America. American sapphires. American turquoise.

The telluride gold deposits of Colorado.

Collective exhibit of iron ores and of coal.

The electric map of the mineral resources of North and South America.

Great exhibit of petroleum and of its products.

Model of the first petrolcum well.

Automatic handling of ores.

Methods of ore reduction and concentration.

Automatic transportation.
Silicified wood from Arizona.
Library of mining literature.
Newly discovered diamonds from
Wisconsin.

Azurites and malachites from Arizona.

The largest natural native nugget of silver, weighing 300 pounds. Gold from Cape Nome and the Klondike.

The classification of mineral exhibits is as follows:
Minerals, ores, native metals, gems, crystals and geological specimens; mining machinery, tools and appliances for underground mining; timber cutting and framing machines for use in mines; blasting implements and hand tools; steam, compressed air and electric drills; diamond drills; oil, gas and





water boring machinery, coal cutting machinery; machinery, tools and appliances used in placer, hydraulic or "drift" mining and an historical exhibit; machinery for crushing, pulverizing and milling ores; machinery for quarrying stone; machinery, tools and appliances used in moving, delivering and storing ores and coal; ores and metallic products; metallurgy of iron, steel, tin, zinc, nickel, cobalt, copper, aluminum, antimony and other metals is illustrated by means of machinery and appliances; exhibits of non-metallic mineral products are made, such as abrasive, grinding and polishing material; limestones, cements and artificial stone; graphite, clays, salts, sulphur, pigments, etc. Combustible materials include coal and coke, asphalt and its compounds, petroleum, illuminating and lubricating oils, and natural gas. The quarry products include marbles, ornamental stones and building stones. A vast amount of very useful information is presented in the

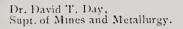
literature of mining, with maps, models and pictures illustrating the geology and distribution of minerals and mines, and the methods of working mines; charts, diagrams and tabular representations; mine engineering and statistics of mining and metallurgy.



MINERAL WEALTH.

For the East Wing of the Esplanade. By Chas. H. Niehaus.

Mr. Chas, H. Niehaus contributes two of the largest groups of the commissioned sculpture for the Pan-American Exposition. These, in representing the given subject, "Mineral Wealth," he has centralized into the "Story of Gold" and the "Story of Light," as interpreting, respectively, solid and fluid (gaseous) mineralogy. And, likewise, in each of these groups, he has again centralized the distinctive idea in the female figure of each group, as in "The Story of Gold" where the "Genius of Opportunity" is seen calling through her fingers to waken the world to its waiting possibilities, and in "The Story of Light" where the "Genius of Inspiration" is holding aloft a torch to show the source of enlightenment. The themes are elaborated by male figures.





AGRICULTURE. By Phinister A. Proctor.

This is a group in the Court of Fountains, carrying out a phase of the symbolic scheme illustrating the purposes and meaning of the buildings surrounding this court, and their exhibits.

## A Sower Went Forth to Sow.

No man takes a more comprehensive view of life and its marvelous possibilities than the up-to-date farmer. He is an artisan, scientist, inventor, philosopher, discoverer, teacher, all in one. By developing the possibilities of seed and soil he has developed himself. In the last few years agricultural colleges have multiplied rapidly, a Department of Agriculture has been created in our Federal Government and the business of the farmer has become a science. Haphazard farming is a thing of the past or has no excuse for continuance.

For these reasons the Division of Agriculture at the Exposition is a most interesting one. Frank A. Converse, the superintendent, has brought together a magnificent showing of the agricultural interests of the Western World. No less than 18 States have important exhibits in this division, a remarkable number, considering the short time allowed for preparation. The agricultural exhibit includes not only the ordinary crops, but the commercial forms of these crops, from many States and countries. Tables and statistics show the various crops produced in each State, province and country, also the money accruing from them, and so far as this particular exhibit is con-

The main floor is of necessity occupied by the exhibits from the various States. On the north side of the Agriculture Building is a large gallery in which are the individual exhibits and those of the different associations.

cerned, it is exceedingly valuable to all interested.

Frank A. Converse, Superintendent of Agriculture, Live Stock and Dairy Products.

#### AGRICULTURE BUILDING.

Among the handsome façades upon the Court of Fountains is that of the Agriculture Building, nearly opposite the Electric Tower and next north of the Mall. The building is 150 by 500 feet, with a balcony for exhibits along the entire north interior. Along the southern exterior is a stately colonnade, torning loggias of particular attractiveness and beauty. A sunken garden, like a great floral panel, lies between this building and the Manufactures Building on the south. The four main entrances are of rich design, and the color decorations heighten the general beauty. Molded ornaments, representing heads of domestic animals and products of the farm, are much used. The building is from designs by Geo. F. Shepley, of Boston.





HORSE TRAINER. By Frederic G. Roth.

Mr. Roth has been very successful in the sculpture of animals, and this is one of his best achievements. It was executed for the purpose of ornamentation of an open space near the Live Stock Buildings and expressing the purpose of these buildings and their exhibits

## The Humble Beet and Its Products.

A large space is occupied by the American Beet Sugar Association, which includes all of the beet sugar factories in the United States. This exhibit shows the entire series of operations of beet sugar manufacture, from the growing of the beets to the finished products.

# Business of the Busy Bee.

An exhibit of live bees carrying on their daily occupation of gathering and storing honey is arranged in the gallery. The different State associations interested in bee culture have displays showing the commercial forms of honey and its products. Canada makes a fine display. Bee-keepers' supplies are also here applenty. Other exhibits in the gallery are those of prominent seed houses, showing all varieties used by the American people. Individual exhibits of leaf tobacco are also shown, which give some idea of the vast extent of the tobacco industry.

# The Indispensable Experimental Station.

An exhibit of wide interest is made by the Office of Experiment Stations at Washington, D. C., under the supervision of Dr. A. C. True, Director. This

is supplemented by the New York State exhibit from Geneva, under the direction of Dr. W. H. Jordan. This presents largely the work of fertilizers, and dairy bacteriology, feeding, statistics, the combating of destructive insects, etc.

An exhibition of malted liquors is made by large firms in the United States and Canada. The Vermont Maple Sugar Association has an exhibit of maple sugar in all of its commercial forms, which shows something of the importance of this industry, particularly in the State of Vermont.

Large relief pictures have been placed upon the walls at either end of the building, and on either side of the entrance of the north and south sides. These pictures were arranged by manufacturers of agricultural implements and railroad companies, and show the manufacturing plants where modern machinery is made, and farm and other scenery along the lines of railways represented.



## Dairy Interests Are Imposing.

Uncounted millions are invested in dairying in the States and countries of the Western World, and what we see here is the highest and best achievement in this vast industry. In the Dairy Building, which stands just east of the Agriculture Building, are the dairy supplies, and exhibits of butter and cheese. One of the most attractive lines of exhibits is that of centrifugal cream separators, exhibited by the United States and Canada. Two very large refrigerating cases contain the butter and cheese; the one devoted to cheese stands always at 50 degrees and the one for butter always at 40. Perfect texture and quality are thus guaranteed.

The Model Dairy, in the Live Stock Exhibit, contains 55 animals, eleven breeds being represented by five animals each. The stable for this dairy represents the latest ideas in stable construction, and serves as an important object lesson for dairymen, especially with reference to hygienic and sanitary conditions. Accurate data is kept of each animal,

regarding her performance with reference to production and cost of maintenance. Frank A. Converse is superintendent of the Dairy Division.

# Live Stock and Dates of Shows.

In the Division of Live Stock, Frank A. Converse,



AGE OF ENLIGHTENMENT.
By Herbert Adams.

This group is in the east wing of the Esplanade, in front of the group of Government Buildings, and is one in a series expressing the progress of man from the savage to the enlightened state. The idea which Mr. Adams wishes to express in the central portion of this composition is the blessings of peace which enlightenment brings to the human race. The central figure, that of a woman, is holding a scroll in her lap. Two youthful figures on either side—the one a young boy and the other a young woman—are receiving instruction, this symbolizing intellectual advancement. Below are two figures—the one a male figure, representing inventive genius, the other a female figure with a lyre and pallette—symbolizing artistic genius.

There is a second group by Mr. Adams, also illustrating enlightenment, and this is again composed of a central figure—a woman—holding a child. The two youthful figures at either side complete the family aspect. There are also two figures somewhat below this central composition, again a male and a female, the male expressing law and organization, while the female with her books and a globe and cross symbolizes tradition. The figures in these are about nine feet in height.

Design on the Official Diploma. By Raphael Beck.



superintendent, there are 17 pavilions, covering 10 acres of ground. These are for the accommodation of live stock exhibits, which are arranged according to the following dates: Bench Show, Aug. 27 to 30; Swine, Aug. 26 to Sept. 7; Cattle, Sept. 9 to 21; Sheep, Sept. 23 to Oct. 5; Horses, Oct. 7 to 19; Poultry and Pet Stock, Oct. 21 to 31. A wool exhibit from all the Americas is arranged for the first week in June.

Classification has been made for the Bench Show so as to cover all the popular varieties of clogs. \$3,500 is offered in premiums, aside from \$2,500 in cash, silver and plate. Exhibits are from the various kennels throughout the United States and Canada.

## High Steppers and Hard Pullers.

The dates of the fashionable Horse Show at the Exposition are October 7 to 19. Events of great interest are scheduled for every day or evening during the entire two weeks. Representative horsemen from Chicago, New York, Newport and Detroit will participate in this important society function with their elegant turnouts of many descriptions. Large prizes have been offered and there will be a fine display of thoroughbreds, Shetland ponies, draught and saddle horses. Sixteen breeds of horses are to be represented in the horse exhibit, special attention being given to animals suitable for cavalry service.

## Social Qualities of the Hen.

The hen has often been referred to as the farm-mortgage lifter, and her importance is fully recognized at the Exposition. She will be present 15,000 strong, in a hundred breeds. Along with the great poultry carnival during the last ten days of October will be the Pet Stock Show. Included in this will be the display of Belgian hares, a new favorite of the farm, a great variety of pigeons, and many kinds of domestic cats. Among the cats will be a pair of Angoras from Newport, which cost \$3,200.

# Grangers Coming 300,000 Strong.

The Grangers expect to visit the Exposition to the number of not less than 300,000. They are coming from all parts of the country, singly and by special excursion arrangements. A Grange Building, erected for the convenience of these farmers' organizations, stands upon the Mall near the Dairy Building. It is in charge of a representative of the New York State Grange, which alone has a membership of 60,000.

## Timber Talk.

The Forestry Building is of rough construction, the exterior resembling a great log house, and the roof is made of bark slabs. The building was designed by W. W. Bosworth and is situated southeast of the Government Buildings, near the Grand Canal. Its nearest neighbors are the log and bark cabins, and the large stockade of the Six Nations Indian exFORESTRY BUILDING PAN-AMERICAN EXPOSITION.

hibit. The Superintendent of Forestry Exhibits is Frederic W. Taylor, with Frederick DePuyster Townsend as assistant. The forestry exhibits include forestry, botany, literature and statistics, arborculture, entomology as related to the combat-

ing of insects, collections and specimens illustrating forest products, timber, process of manipulation and preserving, including wood-pulp, bark, gum, resin and similar products of the forest, seeds and their preparation for use. Exhibits from Cuba and other tropical countries—rich woods, bark and

saps—practically arranged for the information of the public, are made a special feature. Photographs, samples and statistics of the lumber trade and of forestry as related to the devastation of forests, their care and management, from Pan-American countries, are shown. Prominent among the forestry exhibits are those from Michigan, Oregon and the Southern States. The United States Government also makes a very noteworthy exhibit of the woods of different parts of the country, showing the distribution of various species and the effect of the denudation of land of its forest growth.

### Uncle Sam in Evidence.

The United States Government Board has expended its half-million dollars with splendid results. Every department is here with its best possible showing. The exhibits are housed in a magnificent group of three buildings, one of them more than four hundred feet long by one hundred and thirty feet wide, and with a central dome two hundred and fifty feet high.

The two lesser buildings are each one hundred and fifty feet square, and are connected with the main building by massive arcades. The architecture is Spanish, of an enduring aspect.

Seven thousand square feet are devoted to the exhibit made by the United States Treasury Department under Wallace H. Hills, Superintendent of the Treasury. A feature of this large exhibit is a lighthouse, forty-five feet high, under the

> central dome of the large building, being an exact reproduction of one of the best known lighthouses on the Atlantic coast. The Mint is represented by a coin press having a capacity of eighty coins per minute. This is kept in operation making souvenir medals. The Bureau of Printing shows a plate printing press turning out souvenirs. The Marine Hospital Service shows a model of a quarantine station. The Coast and Geodetic Survey exhibits a miniature tide gauge. A big knife used for a quarter of a century in the Treasury Department, for cutting bills in two when turned in for United States Government

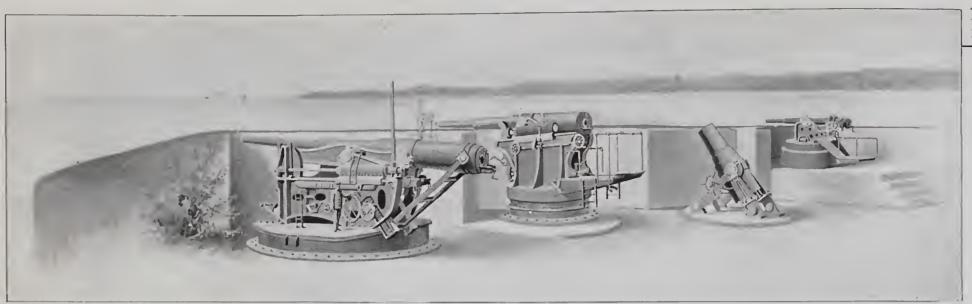


Main Building.

redemption, is one of the curios. The Treasury officers estimate that the blade of the knife has passed through bills representing a face value of between five and six billion dollars. The first ledger and journal kept by the treasurer of the colonial government, the oldest government record in existence, is shown. A specimen of every coin issued by the United States and some of the finest made by other governments are exhibited. The Life Saving Service exhibit is also under Mr. Hills. A special station has been erected on the shore of the Exposition lake, where daily exhibitions are given.

A distinguishing feature of the Navy Department exhibit under B. F. Peters is a map of the world, eight by twenty feet, showing in large, legible letters the principal maritime ports of the world, and the United States navy yards and stations at home and abroad. The great map is arranged upon a table and covers the globe from the 6oth parallel north to the 6oth parallel south. Upon it are placed 307 miniature lead models, each representing a battleship, cruiser, monitor, gunboat, torpedo boat, submarine boat, sailing vessel, collier or tug of the United States Navy, in commission, in ordinary, under repairs or under construction. The models of cruising vessels are painted white, the torpedo boats green, the colliers and sailing vessels black, and the tugs and yard boats orange. The largest of the models is not more than one and a half inches in length. The position of each model upon the map shows the locations each day of the corresponding vessel of the navy. Each model flies a pennant with its name printed on in bold type. The display of a tiny flag on the model signifies that the corresponding vessel of the navy is in commission for service. and when no flag is displayed it signifies that the corresponding vessel of the navy is laid up in ordinary, under repairs or under construction. This exhibit is a 20th century kindergarten lesson descriptive of the navy as it is to-day; and to those persons who have not had an opportunity to visit our various navy





yards or see our squadrons manœuvered, a glance at it probably gives a more accurate idea of the composition of our navy than can be had in any other way. The many other features of the naval display are full of interest to the inquiring mind.

The Department of Labor, represented by Chas. H. Verrill, makes an exhibit of its work, as shown by its annual and special reports, and its bi-monthly bulletins dealing with subjects connected with labor, especially in its relation to capital, the hours of labor, the earnings of laboring men and women, and the means of promoting their material, social, intellectual and moral welfare. Some of the objects and results of investigation are illustrated by figures, charts and special printed matter. In connection with this is shown, also, the work which has been done by the various State Bureaus of Labor along the same lines.

The exhibit of the Department of Justice, under direction

of Frank Strong, consists mainly of portraits, figures, documents and records of historical interest. The exhibit is a very extensive one, and of deep interest to lawyers, authors, writers, and the intelligent public in general. An interesting branch of the exhibit are the photographs and views connected with United States prisons and prisoners, and the curious productions illustrative of the ingenuity of men when in confinement.

The exhibit of the Post-Office Department, in charge of John B. Brownlow, is the most complete ever shown. It includes a collection of all the postage stamps ever used by the United States, valued at more than \$50,000; a collection of old stamps and equipment for handling the mails from Cuba, Porto Rico and Hawaiian Islands; models of uniformed mail carriers of the United States and other countries,

equipped with the insignia of their respective governments; models of various mail steamships and small steamers employed in the mail service; the model of a United States mail car completely furnished; models of German mail coaches and carts; an old mail and passenger coach used in the frontier service many years ago; an Indian mail carrier with toboggan, and other odd exhibits. The exhibit occupies 5,000 square feet of space.

It is impossible in brief space to give an adequate idea of the very great extent of the Government exhibits, as each one of

them is deserving of a long chapter.

The Fishery exhibit occupies the southern building of the United States Government group. The exhibit treats of scientific inquiry, fish culture, methods and statistics. There are thirty-two tanks, containing the salt and fresh water fish propogated by the United States Fish Commission, and all the economic and food fishes of the North Atlantic coast and inland waters. The corridor surrounding the tanks is in semi-darkness, and the tanks are lighted from the back, thus giving a clear view of the aquatic life within. The supply of fresh water comes from Lake Erie, and the salt water is brought from Wood's Holl, Mass., in tank cars. Large settling tanks have been arranged beneath the building, from which it is supplied by means of nickel pumps to the storage tanks above, and thence by gravity to the fish tanks. The water is kept at a low temperature by means of an ice machine. The many curious specimens of fishes make this exhibit one of very unusual interest. Besides the living exhibit there is a large collection of fishing apparatus of every description.

The Department of the Interior has exhibits from the Bureau of Indian Affairs, the Geological Survey, Patent Office, Land Office, Bureau of Education and Census Office. These are in charge of F. W. Clarke. The exhibit of models from the Patent Office is of especial interest owing to the great progress of invention during the last few years.

The Department of State illustrates, by means of blanks, circulars and charts, the workings of the Diplomatic Bureau, Consular Bureau, Bureau of Statistics, Bureau of Accounts, Bureau of Indexes and Archives, Bureau of the Rolls and Library, Bureau of Commissions and Pardons, Passport Bureau and Mail Division. Many branches of historical interest will be included in this exhibit, showing the important transactions between this and





other countries. The exhibit of this department is in charge of Wm. H. McMichael.

The exhibits of the Department of Agriculture are in charge of J. H. Brigham, who is also Chairman of the Government Board. These are exhibited in the Government Building, and include displays of cereals, tobacco, animal and vegetable fibers, and exhibits from the Bureau of Animal Industry, Weather Bureau, Division of Entomology, Division of Ornithology and Mammalogy, Botanical and Horticultural Divisions, Division of Forestry, Division of Chemistry, Division of Statistics, Division of Microscopy, Division of Vegetable Pathology, Division of Pomology, Office of Experimental Stations, Division of Records and Editing, and Division of Illustrations.

The Paris exhibit of experimental station work is arranged in the Agriculture Building, and is under the supervision of Dr. F. W. True.

The exhibit of the Bureau of American Republics is in charge of William C. Fox, and the very valuable and interesting exhibits from the Smithsonian Institution and the National Museum are in charge of Dr. True. The officials in charge of the several department exhibits constitute the Government Board.

The War Department exhibit is particularly attractive. Capt. Peter C. Harris has had the responsibility of bringing together from many arsenals and army headquarters these varied objects of interest. The ordnance exhibit shows the four types of sea-coast defense guns. The largest is a twelve-inch rifle, weighing 115,000 pounds, mounted upon a disappearing carriage which weighs 350,000 pounds. It is one of those guns that can drive a 1,000-pound projectile twenty-five inches into solid steel armor at a distance of a mile and a half. It takes 240 pounds of smokeless powder, or 490 pounds of brown prismatic powder, to fire it. Other features of the ordnance display are a ten-inch rifle mounted on a barbette carriage, a twelve-inch mortar, a five-inch rapid fire gun, a historical series of old sea-coast defense guns, showing the development of ordnance; mountain,

field and siege guns, and small arms. The engineering section shows modern harbor work and dredging apparatus. The signal section has an exhibit of wireless telegraphy and the several other methods of transmitting information quickly

in time of war. The Military Academy at West Point is represented for the first time at an exposition. The Quartermaster's section shows the latest methods of army equipment.

## Great Exhibit of Commercial Ordnance.

The commercial ordnance exhibit is arranged in two buildings some distance south of the Government Buildings, and is entirely distinct from the Government exhibits, showing what private manufacturers are doing in the United States. Between the two buildings a Gruson turret, 55 feet in diameter, has been constructed and a model 12-inch gun has been mounted within. This type of gun represents the largest which will now be manufactured in this country for coast defense purposes. The turret and its equipment are the first exhibit of the kind ever made in the United States. The Gruson turret illustrates the newest step made toward an impregnable form of defense. The exhibit is so arranged that visitors may go inside and examine at will the entire interior, the magazine, the method of supplying ammunition to the gun in time of war and various contrivances for efficiency of service when it is required. other exhibits in the Ordnance Division, in charge of Lieutenant Godfrey L. Carden, R. C. S., may be outlined as follows:



QUADRIGA on Dome of U.S. Government Building.

Arscnal equipment, consisting of tools and machinery for the manufacture of guns of various types. Armor plate, turret, belt and conning tower, including Krupp and Harveyized armor plates that have actually been fired at. Exhibits showing the adaptability to commercial uses of armor plates, such as for bank vaults, and the adaptability of breech blocks of guns for safe doors. Engineering equipment in the shape of bridge material and entrenching tools. Artillery exhibit, including rapid-fire field guns of various caliber, siege guns, howitzers, mountain guns, standard ship guns, naval landing guns, field mortars, military top guns, launch and life-line throwing guns, heavy naval guns mounted on land carriages after the method employed by the British for transporting naval guns for field work in South Africa. Projectiles showing all forms of shell, both armor-piercing and common, as manufactured in the United States to-day and representing the highest projectile efficiency in the world. Telescopic sights as adapted to use

on siege and field guns, and on machine guns and small arms. Steel forgings for gun construction, shafting and machinery work; machine tools used on hull work of battle-ships, cruisers and torpedo boats. Marine topies, including the latest ideas on bulk-head construction, water-tight doors, ammunition hoisting machinery and turret turning gear. A complete model, 35 feet long, for coaling ships at sea, and other marine contrivances of late origin, including a steam



launch armed and equipped for patrol service. Small arms, including military rifles, revolvers and sporting arms from all the leading arms manufacturers, such as the Winchesters, Colts, Smith & Wesson, Remington, Savage and LeFevre. Ammunition exhibit, including smokeless and sporting powders, loaded shells, eartridges, etc., for guns of all types. Machine guns using small arm ammunition, including Gatling guns, Colt automatic guns, Gardner and Hotchkiss guns. Quartermaster's exhibit, including escort wagons, standard quartermaster's wagons and carts, ambulances, artillery harness, cavalry and artillery saddles, bridles, boots, shoes, leggins, pack outfits, field ranges, tentage, barrack supplies and eamp furniture. Commissary department, including food displays from nearly all houses of the United States making a specialty of supplying rations to military and naval forces. These exhibits will be arranged in a manner showing up-to-date methods of transporting supplies upon the backs of animals in mountainous countries. The hospital group will include hospital furniture, surgical supplies, and a model of surgical stations such as one might expect to find nearest the fighting line in time of battle. The naval architecture exhibit will include a model of a submarine boat of the Holland type.

# Twentieth Century Food Exhibit.

One-fourth of the exhibit space in the Manufactures and Liberal Arts Building is devoted to the division of Foods and Their Accessories, under the superintendence of Frederic W. Taylor, with G. Edward Fuller in charge as assistant. Mr. Fuller has, for many years, made the subject of foods one of special study and research, and is responsible for much of the pure food agitation. He has traveled around the world, and sampled the foods of many countries and peoples. Under his expert direction a most interesting exhibit has been arranged.

As a part of this exhibit Equatorial Pan-America is a realized dream of tropical trees, plants, vines, foliage and flowers too gorgeous for adequate description, which must be seen to be appreciated. This exhibit extraordinary consists of live trees, plants, vines and shrubs selected from plantations and botanical gardens of tropical Pan-America, including allspice, pepper, cinnamon, cloves, nutmeg, ginger, a miniature coffee plantation, with kola, mate, vanilla, tonka, cacao (from which chocolate is made), sago and arrow-root.

A large number of enterprising firms have unique and splendid exhibits. One booth, erected at a cost of \$5,000, is a two-story

colonial structure, where demonstrations of foods are given with particular generosity. Another is a life-sized wax group of a cow, maid and man, to illustrate the famous song, "Where are you going, my pretty fair maid?" Another concern has a very elaborate Dutch kitchen, with old-fashioned features and liberal demonstrations. A salmon-packing plant in miniature, a refrigerating plant operating in a car, a fine model of a packing plant, an elaborate booth made of coffee beans, a tower of glass cans, a palace of sweets made of candies, a spring of running water, a unique booth of totem poles, a booth in the form of a huge egg, and another in the form of a gigantic coffee pot, are among the novelties in this division. It is hoped and believed that the series of displays made by the Division of Foods and Their Accessories will be to a high degree trade-stimulating, serving to make friends for us



PAN AMERICAN LAPOSITION CO.



SOUTH TOWERS MACHINERY AND TRANSPORTATION BUILDING.
PAN-AMERICAN-EXPOSITION CO.

amongst our sensitive and proud neighbors, while showing to our own capitalists that this vast field for development within our own home waters is too promising to be long neglected. The work of this division is designed to prove that the tropical countries of the Western Hemisphere are suited by nature to the growth in large quantities and in great varieties of the products now imported from the Far East, inasmuch as the climate, soil and even meterology and topography of tropical Pan-America are extremely similar to conditions in the East Indies, and some of the inter-tropical Pan-American products at our doors are decidedly superior to the same things grown in those far distant, alien lands.

## Magnificent Lighting Features.

People who expect to attend the Exposition should remember what Henry Rustin, chief of the Mechanical and Electrical Bureau, has promised them in the way of water and light effects, in these words: "First, that the number of lights and the quantity of light exceed that of any other equal area ever artificially illuminated, and it is evenly distributed; second, that unusual spectacular effects are produced by the many combinations of light and water, and these combinations are so graded as to climax in keeping with the decorative lights at the Electric Tower; third, that the Electric Tower basin is the stage of the display of a combination of 1,500,000 gallons of water per hour in fountains, with the light of 100 large-sized search-lights—a scene which is certainly impressive." The promise is abundantly fulfilled, for the illumination is by far the most magnificent spectacle of the kind ever beheld. The searchlight that is operated from the top of the 360-foot level of the Electric Tower of the Pan-American Exposition was made by the General Electric Company. It was the intention of all who had anything to do with this projector to



have it the most wonderful light of the kind ever exhibited. As the Pan-American is intended to eclipse all other expositions in the electrical features especially, it is plain that this searchlight is one of the remarkable night effects. It has great penetrating powers, and when seen it will be easy for anyone to understand how serviceable such powerful lights have been found to be

in revealing the hiding place of a concealed enemy in time of warfare. It is probable that up to this time the darkness of night and the sky have never been penetrated by such a strong ray of artificial light, it being visible at a distance of many miles. There is a glorious beauty about the grounds of the Pan-American Exposition when the several hundred thousand incandescent lamps are burning in their magnificent brilliancy. In deciding to illumine this vast area with incandescent lamps, it was recognized that this light had many

<sup>&</sup>quot;MINERAL WEALTH."
By Charles H. Niehaus.

advantageous features. As Mr. Rustin points out: "It can be burned in any position, at any angle, almost under any conditions, and is easily made a part of any sculptural, architectual, floral or even water effect."

# Largest Fountain Ever Constructed.

Luther Steiringer, consulting electrical engineer, is authority for the statement that the Electric Fountain in the North Bay is the largest ever constructed, throwing its central stream to a height of 200 feet. This fountain is illuminated by means of powerful electric lights.

# Beautiful Landscape Effects.

Considering the fact that a year and a half prior to the opening of the Exposition, that part of it north of a line drawn east and west just north of the New York State Building was a field of heavy clay, splendid results have been secured. Rudolf Ulrich, the superintendent of landscape, has produced a wall of foliage around the grounds, long stretches of sodded banks and thrifty trees, green lawns and beds of brilliant flowers. These combine with gay fountains and splendid buildings to produce an exquisite and impressive picture in the mind of every visitor.



## Brilliant and Festive Interiors.

The artistic color scheme does not end with the exteriors of the Exposition buildings. The same consideration for the



appreciative eye is found within the graceful structures, where rich harmonies of many shades and tasteful decorative effects entertain and delight the vision. Superb masses of color combine or contrast with the beautiful exhibits to produce everywhere a festival aspect. These elaborate decorations were planned and carried out by Miss Adelaide Thorpe, as assistant to Mr. Turner, director of color.

# More Than Half the States Participating.

The largest State appropriation is that of New York—\$300,000—represented in the splendid permanent marble building and in the State exhibits in the several



divisions. The six New England States joined hands in a New England Building,—a large and handsome colonial structure, containing a general reception room and a room for each State. Illinois spent \$75,000 upon her building and exhibits. The Michigan Building and exhibits cost \$40,000. The Ohio Building and exhibits represent an outlay of \$30,000. Missouri expended \$50,000 upon building and exhibits. Washington's investment is \$25,000, and her exhibits represent her resources of timber and minerals. Wisconsin's handsome building and exhibits cost \$25,000. The California fruit exhibits are the result of private enterprise on the part of the Los Angeles Chamber of Commerce. Oregon, Alabama, New Jersey and Maryland each expended \$25,000 for their exhibits. Idaho is represented by exhibits costing \$15,000. Pennsylvania's appropriation was \$35,000 and Minnesota's \$20,000. Nebraska and North Dakota made appropri-

ations of \$10,000 each. Other States represented by creditable exhibits in various divisions are Georgia, Kentucky, Delaware, Montana, Mississippi, Louisiana and Texas.

### Latin-American Countries.

THE ARGENTINE REPUBLIC appropriated \$30,000, gold, for its exhibits at the Exposition, and occupies 1,500 square feet of space in the Forestry Building and 3,700 feet in the Agriculture Building.

BOLIVIA has 2,400 square feet of space, distributed in the Agriculture, Mining and Ethnology Buildings.

BRAZHL has established a Brazilian Fazenda, in miniature, showing the cultivation of coffee, rubber and other products. She also occupies 500 square feet in the Agriculture Building.



Looking West from Court of Fountains.

CHILE is making a magnificent showing, having appropriated for its representation at the Exposition the equivalent of \$170,000, gold. Its building cost \$28,000, and the exhibit is very complete, showing the agricultural, forest and mineral resources of that progressive country.

COLOMBIA is represented by Senor Dr. Luis Cuervo-Marquez, special com-

missioner, but has no exhibits other than those shown by individual exhibitors.



COSTA RICA occupies 1,660

square feet in the Horticulture, Forestry, Ethnology and other buildings, having some very interesting features.

CUBA is represented by a commission of which Senor Don Perfecto Lacoste is chairman. The Cuban Building is a handsome structure, 150 by 275 feet, and cost \$25,000. Cuba, on account of her nearness, has a special interest for many.

THE DOMINICAN REPUBLIC is represented by Senor Don Francisco Leonte-Vazquez, special commissioner, and two other commissioners. This country has erected a special building, costing about \$4,000. Her exhibits are very interesting.

ECUADOR is represented by a special building, having appropriated \$16,000 for this purpose. The exhibit contains many interesting things.

GUATEMALA occupies about 1,100 square feet of exhibition space, in several buildings. The resources of this Central America country are well displayed.

HAYTI makes a special exhibit of very interesting agricultural products.

HONDURAS has a graceful building, costing about \$6,000. Her principal exhibits are those of mines and forestry, in which she is especially rich.

MEXICO has a two-story building, 40 by 60 feet, costing \$5,000, containing only the mining exhibits from that country. Mexico also occupies space to the



Figure of "LAKE SUPERIOR." By Karl Tefft.

amount of 3,000 square feet in the Agriculture Building, 2,000 feet in the Forestry, 2,000 feet in the Horticulture, 3,000 feet in the Manufactures and 2,000 feet in the Ethnology Buildings. Mexico shows a wonderful advancement.

NICARAGUA occupies important space in the Mining, Horticulture, Agriculture and Ethnology Buildings, showing her boundless resources.

PARAGUAY is not exhibiting officially, but Senor Don A. Rutis, Consul for Paraguay in Philadelphia, makes a private exhibit of Paraguayan products, brought from the Philadelphia Commerical Museum and the Smithsonian Institution.

PORTO RICO is spending \$10,000 upon her exhibits. A typical Porto Rican "Rancho," 24 by 78 feet, and 20 feet high, costing about \$2,000, contains most of the exhibits from that productive island. About 1,200 square feet of space in the Agriculture Building is also occupied by Porto Rico. There is much interest





in this island.

PERU occupies space in the Agriculture, Manufactures, Forestry and Mines Buildings, having exhibits of special value.

SALVADOR makes a good showing of her mineral, agricultural and forestry resources in about 2,000 square feet of space.

URUGUAY and VENEZUELA are represented only by individual exhibitors. Venezuela appropriated \$100,000 for an exhibit, but political disturbances compelled an abandonment of the project.

JAMAICA is represented by the Agricultural Society, which has space in the Horticulture and Agriculture Buildings.

MARTINIQUE and GUADALOUPE are represented by Mr. St. Croix de la Ronciera.

It will be noted that 18 out of the 24 governments are represented in an active and official manner, seven of them constructing special buildings for their exhibits. The idea of a Pan-American Exposition is thus very forcibly realized.

CANADA

is spending about \$100,000 upon her exhibits. In addition to the handsome building east of the Agriculture Building, illustrated above, she is represented in many departments most creditably.

# Inscriptions of the Exposition.

Upon the urgent invitation of Director-General Buchanan, Richard Watson Gilder, editor of the Century Magazine, prepared the inscriptions for the various panels upon the prominent buildings. They are as follows:

#### Inscriptions for the Propylæa.

- Panel 1.—" Here, by the Great Waters of the North are brought together the Peoples of the Two Americas, in Exposition of their Resources, Industries, Products, Inven-\*tions, Arts and Ideas."
- Panel 2.—" That the Century now begun may unite in the bonds of Peace. Knowledge, Good Will, Friendship and Noble Emulation, all the Dwellers on the Continents and Islands of the New World."

### Inscriptions for the Stadium.

- Panel r.—" Not Ignoble are the Days of Peace, not without Courage and Laureled Victories."
- Panel 2.—" He who Fails Bravely has Not Truly Failed, but is Himself also a Conqueror."
- Panel 3.—" Who Shuns the Dust and Sweat of the Contest, on His Brow Falls Not the Cool Shade of the Olive."

# Inscriptions for the Great Pylons of the Bridge.

- On the Pylons are statues of Courage, Liberty, Tolerance, Truth, Benevolence, Patriotism, Hospitality and Justice.
- Panel 1.—"The Spirit of Adventure is the Maker of Commonwealths."
- Panel 2.—" Freedom is but the First Lesson in Self-Government."
- Panel 3,-" Religious Tolerance a Safeguard of Civil Liberty."

- Panel 4.—" A Free State Exists Only in the Virtue of the Citizen,"
- Panel 5.—" Who Gives Wisely Builds Manhood and the State—Who Gives Himself Gives Best."
- Panel 6.—To Love One's Country Above All Others is Not to Despise All Others."
- Panel 7.—"The Brotherhood of Man—The Federation of Nations—The Peace of the World,"
- Panel S.—" Between Nation and Nation, as between Man and Man, Lives the One Law of Right."

#### Dedicatory Inscriptions.

- Panel 1.—Agriculture Building. "To the Ancient Races of America, for whom the New World was the Old, that their love of Freedom and of Nature, their Hardy Courage, their Monuments, Arts, Legends and Strange Songs may not perish from the Earth."
- Panel 2.—Manufactures and Liberal Arts. "To the Explorers and Pioneers who blazed the Westward Path of Civilization, to the Soldiers and Sailors who fought for Freedom and for Peace, and to the Civic Heroes who saved a Priceless Heritage."
- Panel 3.—Machinery and Transportation Building. "To the great Inventors and farseeing Projectors, to the Engineers, Manufacturers, Agriculturists and Merchants who

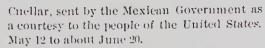
have Developed the Resources of the New World, and Multiplied the Homes of Freemen.

- Panel 4.—Machinery and Transportation. "To those who, in the Deadly Mine, on Stormy Seas, in the Fierce Breath of the Funace and in all Perilous Places work ceaselessly to bring their Fellowmen Comfort, Sustenance and the Grace of Life."
- Panel 5.— Agriculture Building. "To the Scholars and Laborious Investigators who, in the Old World and the New, Guard the Lamp of Knowledge and, Century by Century, Increase the Safety of Life, Enlighten the Mind and Enlarge the Spirit of Man."
- Panel 6.—Electricity Building, "To those Painters, Sculptors and Architects, Tellers of Tales, Poets and Creators of Music, to those Actors and Musicians who in the New World have Cherished and Increased the Love of Beauty."
- Panel 7.— Manufactures and Liberal Arts. "To the Prophets and Heroes, to the Mighty Poets and Divine Artists, and to all the Lightbearers of the Ancient World who Inspired our Forefathers and Shall Lead and Enlighten our Children's Children."
- Panel S.—Electricity Building, "To the Statesmen, Philosophers, Teachers and Preachers, and to all those who, in the New World, have Upheld the Ideals of Liberty and Justice, and have been Faithful to the Things that are Eternal."

# Bands at the Exposition.

An elaborate program of band music has been arranged, to continue throughout the season. From the beautiful band stands on the Plaza and Esplanade concerts are given during each day and evening of the entire six months of the Exposition. Every band engaged has won distinction, and several of them have a world-wide reputation. Following is a list, to which others will be added:

Mexican Artillery Band, 50 men, Capt. Rleardo Pacheco, director. This band accompanies the detachment of Rurales under command of Capt. Samuel Garcia



74th Regiment Band, Buffalo, 35 men, May 1 to July 31.

65th Regiment Band, Buffalo, 35 men, May I to July 31

71st Regiment Band, New York, 45 men, May 6 to June 2.

13th Band of Hamilton, 40 men, June 3 to 9. Sonsa's Band, New York, 50 men, June 10 to July 7. Elgin Band, Elgin, 111., 50 men, July 8 to Aug. 4. Scinta's Band, Buffalo, 35 men, July 29 to Aug. 25. Carlisle Indian Band, Carlisle, Pa., 40 men, July 29 to Aug. 25.

Ithaca Baud, Ithaca, 35 men, Aug. 5 to 11.

48th Highlanders, Toronto, 40 men, Aug. 26 to Sept. 1.

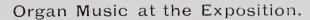
Salem Cadet Band, Salem, Mass., 45 men, Sept. 2 to 15.

Brooke's Band, Chicago, 46 men, Sept. 9 to Oct. 6. Boston Ladies Band, Boston, 30 ladies, Sept. 16 to 29 19th Regiment Band, St. Catharines, 45 men, Sept. 16 to 21.

Phinney's Band, Chicago, 45 men, Aug. 5 to 25. Victor Herbert's Orchestra, Pittsburg, 60 men, Oct. 7 to 20.

Innes Band, New York City, 49 men, Oct. 7 to 20. Robertson's Band, Albany, 40 men, Aug. 26 to 31. Lund's Orchestra, Buffalo, 50 men, Aug. 12 to Sept. 8.

Porto Rican String Band, 20 pieces, two months.



Daily recitals are given in the Temple of Music by prominent organists, the list of those engaged representing nearly every prominent musical center in the United States and Canada. The list here given contains many distinguished names:

May 1-19-1, V. Flagler, Anburn, N. Y.; C. P. Garratt, Hamilton, Ont.; N. H. Allen, Hartford, Conn.; Wenham Smith, Newark, N. J.; Gerritt Smith, New York City.

May 20-22—Frederic Archer, Pittsburg, Pa. May 23-25—W. E. Fairelough, Toronto, Canada, May 28-30—W. C. Hammond, Holyoke, Mass, May 31-June 1—W. P. Stanley, Brooklyn, N. Y. June 2-6-H. J. Stewart, San Francisco, June 7-8-Russell K. Miller, Philadelphia, Pa. June 9-12-Richard T. Perey, New York City, June 13-16-J. Frank Donalioe, Boston, Mass, June 17-19-E. Russell Sanborn, Boston, Mass, June 20-22-Gustave Frese, Louisville, Ky. June 23-25-Chas. E. Clemens, Cleveland, O. June 26-27-Henry Houseley, Denver, Colo.



June 28-30 - Harrison M. Wild, Chicago. July 1-2 - Albert Jordan, Bramford, Canada. July 3-6-Louis Falk, Chicago. 111. July 7-9-Archer Gibson, Baltimore, Md. July 10-11—F. W. Reisberg, New York City, July 12-14—William Reed, Quebec, Can. July 15-17—Frank II, Simms, New Orleans, La. July 18-20—Francis L. York, Detroit, Mich. July 21-23-J. D. Dussault, Montreal, Can. July 24-25—8. D. Cushing, Toledo, O. July 24-28—Mrs. Mary C. Fisher, Rochester, N. Y. July 29-Geo. B. Carier, Delaware, O. July 30-W. H. Hewlett, London, Ont. July 31 – Ferdinand Dunkley, Ashville, N. C. Aug. 1-3 – Hamlin II, Hunt, Minneapolis, Aug. 4-6-Chas Galloway, St. Louis, Mo. Aug. 7-8-A. Ray Tyler, Brooklyn, N. Y. Aug. 9-Wm. C. Schwartz, Philadelphia, Pa.

Ang. 10-Benjamin J. Lang, Boston, Mass. Aug. 12-14-Sumner Salter, Ithaea, N. Y. Aug. 15-16-R. H. H. Clarke, Meriden, Conn. Aug. 18-20-W. S. Sterling, Cincinnati, O. Aug. 21 22—Miss Emma L. Maynard, Gary, S. D. Aug. 23-25—Arthur Bernier, Quebee, Can. Aug 27:28-Walter Heaton, Reading, Pa. Aug. 29-31—Henry Gordon Thunder, Philadelphia. Sept. 2-4—Gaston M. Dethier, New York City. Sept. 6-8—Everett E. Truette, Boston, Mass. Sept. 9—Harry L. Vibbard, Syracuse, N. Y. Sept. 10-11-Samuel P. Warren, New York City. Sept. 12-13—Miss Gertrude Sans-Souci, St. Paul, Minn. Sept. 14-Harry J. Zehm, Harrisburg, Pa. Sept. 18-19-Thomas Radeliffe, Salt Lake City, Utah, Sept. 20-Henry B. Vincent, Eric, Pa. Sept. 21-22-Herve D. Wilkins, Rochester, N. Y. Sept. 23-C. A. Stein, Troy, N. Y.

Sept. 24-25-J. B. Tipton, Albany, N. Y. Sept. 26-27-11. R. Woodman, Brooklyn, N. Y. Sept. 29:30 - Miss Fannie M. Spencer, New York City, Oct. 1-John P. Lawrence, Washington, D. C. Oct. 2-3 -W. H. Donley, Indianapolis, Ind. Oct. 4-6-Harry B. Jepson, New Haven, Conn. Oct. 7-8—Miss Ione B. Riddell, Cinciunati, O. Oct. 10-12—William C. Carl, New York City. Oct. 13-16-Clarence Eddy, New York City. Oct. 17-18—Harry Rowe Shelley, New York City.
Oct. 21-23—N. I. Corey, Detroit, Mich.
Oct. 27-29—William B. Colson, Cleveland, O.
BUFFALO ORGANISTS—William J. Gomph, official organist; Andrew T. Webster, Will S. Jarrett.

Henry S. Hendy, Seth C. Clark, Miss Mary McConnell and Ulysses Thomas.

# Special Days at the Exposition.

During the Exposition there will be many special days. These will be char acterized in many instances by elaborate ceremonies. Following are some of the principal ones and others will be announced as the season advances:

May 1 Opening Day. May 20-Dedication Day. June 6-Hotel Men's Day. June 12-Coal Men's Day. June 13--President's Day. June 14 Flag Day. June 17-Daughters of American Revolution Day. June 18-Wells College Day. June 19-A. O. U. W. Day. June 20-Connecticut Day. June 21-Rochester Day. June 21 to 29 - Saengerfest, June 26 - Odd Fellows' Day. June 27-Odd Fellows' Day. June 27 - Volksfest (evening). June 28-Cincinnati Day. June 29—Philadelphia Day, July 2—Wellesley College Day, July 4-Independence Day. July 5-Liederkranz Day. July 10-Maryland Day. July 11—Commercial Travelers' Day. July 16-Chautauoua Day.

July 18-Ohio Day. July 23-C. M. D. A. Day. July 21-Knights of Columbus Day and Utah Day. July 25-Seandinavian Day and Porto Rico Day. August 1-Mystic Shriners' Day. August 10-Missouri Day. August 14—Virginia Day. August 15—Red Men's Day. August 21-Louisiana Day. August 22-Electrical Day. August 26-Municipal Day. Sept. 3—District of Columbia Day. Sept. 6-National Association of Stationary Engineers. Sept. 10-Rhode Island Day. Sept. 12-Polish Day. Sept. 16-Mexican Day. Sept. 17-G. A. R. Day. Sept. 19-Welsh Day. Sept. 20-St. Catharines Day. Sept. 25—Oregon Day. Oct. 8—Brooklyn Day. Oct. 9—New York Federation of Women's Clubs. Oct. 10-National Grange Day.



# Other Features Not To Be Missed.

Luther Steiringer, who has the credit of originating much of the electrical and fountain display at the Exposition, is also the personal representative of Thomas A. Edison here. Speaking of Edison's new storage battery, which is shown in the Electricity Building, Mr. Steiringer says: "It is a revolution. It weighs less than half the present storage battery, can be charged at any voltage and does not require renewal. The great possibilities of this battery in automobile construction alone are beyond estimate."

The Exposition furnishes the first opportunity to thousands of people to examine the system of wireless telegraphy. There are two exhibits of this character—one in the Electricity Building and another in the United States War Department exhibit. Messages are sent to and from Fort Porter, about three miles away, by the wireless method.

In the Ethnology Building may be seen a map, 20 feet long by 14 feet wide, showing the distribution of aboriginal languages on the American continent. Upon another map, 5 by 10 feet, incandescent lamps show the location of 80 Indian villages and camp sites on the Niagara frontier.

Ohio mounds have yielded much valuable information concerning the prehistoric people. Skeletons, weapons, implements and other curios, and a stone grave from Ohio, are among the exhibits in the Ethnology Building.

The Cuban Building has a central place among the State and Foreign Buildings. Its architecture is characteristic of the island, with a Tower of Havana as a conspicuous feature. The exhibits, gathered from all parts of the island, illustrate the great variety and surprising value of the resources of that island country. They show to some extent the opportunities for the investment of capital, with promise of liberal return, in plantations, mines and manufacturing enterprises. The Cuban commissioners also have their offices in this building.

The scientific exhibit prepared by Frederic J. H. Merrill, New York State geologist and director of the State Museum, is displayed in the Mines Building. It shows the mineral resources of New York State, which are far greater than is commonly supposed. The manufacture of gypsum into wall plaster—a new industry—gives special interest to the quarries producing this kind of rock. The plaster on the Exposition buildings and used in the statuary is largely New York State gypsum.

Among the special exhibits in the Ethnology Building are models of cliff dwellings, a large map of Hiawatha country, relics of the Seneca Indians during the transition period when both the stone-age and European implements were in use; Art Gallery of Indian portraits and compositions, illustrating aboriginal life; phonograph grand, reproducing Indian songs, speeches and legends; and exhibits illustrating the archæology of Canada, Mexico, Central and South America, and various portions of the United States.

A model sick bay—the hospital of a battleship—constitutes a feature of the Navy Department exhibit in the main Government Building. It was arranged under direction of Naval Constructor William J. Baxter.

The illumination of Niagara Falls by searchlight is a feature of the present season. The falling waters, under the changing colors of powerful electric projectors, produce an impressive spectacle.

It is entirely proper that the first important display of acetylene gas apparatus should be made so near the source of supply of carbide, the substance which, when brought into contact with water, produces this powerful illuminant. The Acetylene Building is a center of interest for many.

Prof. Stuart Culin's exhibit from the University of Pennsylvania, in the Ethnology Building, portrays the games of skill and chance played by the aborigines of Florida. The relics are largely from mounds in Florida.

Prof. W. J. McGee, of the Bureau of Ethnology at Washington, exhibits his studies of trephining among the early Peruvians. A large cabinet of trephined skulls tells a story of surgical expertness with flint instruments in prehistoric times.

The Government Forestry exhibit, under supervision of Gifford Pinchot, has the merit of newness as well as that of exhaustively treating the subject of forestry. A part of the exhibit was at Paris.

The electric fountain in the North Bay, opposite the New York State Building, and the great cascade and fountains in front of the Electric Tower, are brilliantly illuminated by hidden lights. The effect is rich and beautiful—indeed, a novelty such as no pen can attempt to depict.

Forty manufacturers are represented in the great automobile exhibit in the north part of the Machinery and Transportation Building.

An interesting pumping plant of great capacity—35,000 gallons of water per minute—is arranged in the central court of the Machinery and Transportation Building, to supply water to the cascades and fountains of the Electric Tower.

Canada makes a large display of minerals. Her resources in metalliferous deposits and her wealth of rich quarries pass all comprehension.

A walk through the Horticulture Building convinces one of the sublime enterprise of Southern California. The Los Angeles Chamber of Commerce loses no opportunity to let the world know of the boundless resources of the Land of Sunshine, in the production of wealth, health and happiness.

The Knights and Ladics of the Maccabees, with much forethought and enterprise, were early in creeting a suitable building to be used for the reception and headquarters of members of the Order while visiting the Exposition. It is a pretty structure, south of the Government Buildings.

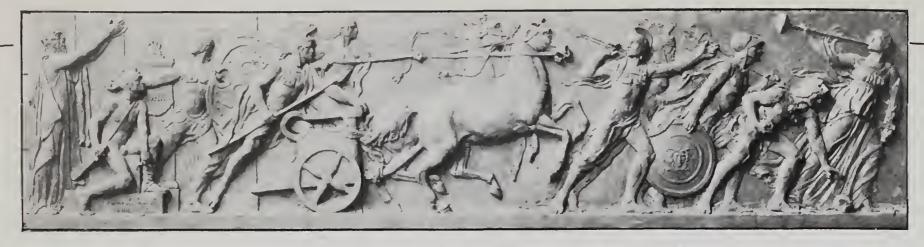
Among the objects of interest in the Patent Office exhibit, in the Government Building, in charge of Walter H. Chamberlin, are a number

of machines and appliances of recent invention, including talking machines; machines that automatically reproduce a man's handwriting at distant points; machines for reproducing a photograph at a distant place; a sectional model of a carborundum furnace; latest harvesting machinery; linotype and monotype machines; the radiophone, by which articulate speech is transmitted by rays of light; a paper-making machine; a Welsbach burner using an oil flame; and many others equally interesting.

The Ancient Order of United Workmen are here with a handsome pavilion, 40 by 50 feet, the entire upper floor being a balcony from which interesting views are obtainable in all directions. Here are reception and resting rooms, and a Bureau of Information for the use of members of the Order.

The exhibit of the National Museum, under Dr. F. W. True, in the Government Building, is divided into three great groups: Anthropology, zoology and geology. A remarkable collection of relics of ancient people, the remains of animals and specimens of rocks has been brought together, and will repay many hours of study.

In the exhibit of the State Department, in the Government Building, may be seen the original draft of the Declaration of Independence, written by Thomas Jefferson, with interlineations in the handwriting of John Adams and Benjamin Franklin, with the old-fashioned desk on which Jefferson wrote it. Many relics of George Washington are displayed, among them a quaint pair of eye-glasses given him by Lafayette and the sword which Washington were during the Revolution—the same old blade which he unsheathed when he took command of the army and dedicated to the services of his country. Many historic swords are exhibited. Another object of interest is a silk flag, woven in one piece and presented to the United States by 25,020 weavers of Lyons, France, as an expression of their sympathy at the time Lincoln was murdered. Letters from Napoleon Bonaparte and other kings, queens and notables, are shown where all may see them.



DECORATIVE FRIEZE BY OSCAR L, LENZ, ON TRIUMPHAL CAUSEWAY. THE FRIEZE ILLUSTRATES "PATRIOTISM."

It is 18½ feet high and the theme is treated in the Greek style. It represents patriots starting forth to defend their fatherland in response to the trumpet call of a Victory. The relief is eminently decorative. The classic severity of line corresponds to the general architectural style of the bridge, and vigorous, tense action shows the virility of the figures and gives dash to the entire panel. The faintly defined curve formed by the poses of the group suggests the spring of a bridge arch. A gradual increase of motion is indicated by the sculptor's conception and treatment of his figures, beginning with a patriarch, in an attitude of dignity and repose, who bestows his blessing upon the departing warriors, and culminating in a Victory in wind-blown robes, who sounds inspiring notes from her trumpet.

A similar panel is placed over the entrance to each tower, ten feet from the ground. The horses drawing the chariot are directly over the doors by which the towers are entered.

## Builders of the Exposition.

Never was an exposition more completely an enterprise of the people than this. Nearly 12,000 citizens of Buffalo became subscribers to the stock. They represent every walk of life—merchants and bankers, their clerks and book-keepers; manufacturers and their operatives; railroad corporations and their employees; lawyers, brokers, capitalists and laborers. The citizens of Buffalo and the railroads centering here have supplied the funds.

In order that architectural harmony might be secured, a Board of Architects was elected, composed as follows: John M. Carrere, chairman; George F. Shepley, R. S. Peabody, Walter Cook, John Galen Howard, George Cary, Edward B. Green, August C. Esenwein. Director of color, Charles Y. Turner; director of sculpture, Karl Bitter.

Newcomb Carlton, as director of works, saw the first clay upturned and remained with his task night and day till the unattractive landscape which lay north of the Park had been transformed to a garden of unsurpassed beauty, set with the richest of architectural gems. All the buildings were constructed within a year, the first timbers being raised June 4, 1900. The landscape effects were planned and completed under the superintendence of Rudolf Ulrich. J. H. Murphy had the superintendence of building construction. Samuel J. Fields performed the work of chief engineer. Henry Weatherwax was chief draughtsman.

# Beautiful Buffalo

and Some of Her Claims to Distinction.

"You Buffalo people don't brag enough," said a Chicago young lady. "You don't tell enough about the beautiful city you have." I, therefore, throw modesty to the winds and hope I may say what the best of our citizens think about Buffalo. I will also inject a few figures, to give body to my remarks. Buffalo is the eighth city in size in the United States—big enough to take care of itself in most affairs. The actual population, according to the last census, is 352,387, but we prefer to say400,000 because it sounds bigger and makes up for possible errors in the census. The situation of the city is at the eastern extremity of Lake Erie, where the waters break into a run for Ontario, by way of Grand Island and Niagara Falls. Buffalo plays shortstop for the winds of the lake, which temper the summer climate to such an extent as to make it one of the most delightful summer cities of the world. Hence the even temper of our people, which I am sure will express itself in their hospitality toward visitors during the Exposition season. I shall charge any inhospitable action to strangers sojourning here in the role of hosts simply to make money and having no pride in the good name of the city.

I also give warning that I shall minimize or pass over any defects in Buffalo, preferring that, if you wish to find them out, you do so by your own efforts. I confess ignorance of them. I have long observed that those looking for trouble, in any city, find it, and those who follow the path of rectitude rarely get into difficulty. Permit me, then, to quote you only the important facts concerning the city, to show you the beautiful features of a great town, and to guide you to this and that object of real interest.



## Some Features of Buffalo.

The limits of Buffalo contain 42 square miles, or about 25,-000 acres, and the city is approximately five miles wide and eight miles long. Here and there it has spread beyond its boundaries. No city ever had a more favorable site. It is upon a great plain, where there is abundant room to grow without serious crowding, and there are no hills to interfere with traffic.

While some parts of Buffalo are closely built, the outlying sections have shady streets and bright lawns, and the color of flowers is everywhere to be seen.

The city is one of the most healthful, having an abundant supply of pure water from Lake Erie, and some 225 miles of smooth asphalt pavement, which is recognized as having a sanitary value in making unnecessary and unlikely the accumulation of matter deleterious to health.

There are enough histories of Buffalo, for present use, in the libraries, so I refer you to those for details and content myself with a very brief narration. The city was founded by Joseph

Ellicott, agent of the Holland Land Company, in 1801, and the Pan-American Exposition is in part a celebration of the centennial of that most interesting event. The place became a military post in 1812, and was burned by the British in 1814. It was rebuilt at the close of the war and was chartered as a city in 1832.



The city has a frontage of about 8 miles upon Lake Erie and the Niagara River, and a great harbor is formed by a new breakwater recently built by the United States Government at a cost of \$4,000,000. Buffalo Creek and its branches form an extensive inner harbor, upon which the great elevators, ship and lumber yards, coal trestles, ore docks and other paraphernalia of marine commerce have been constructed at the cost of many millions of dollars. One may have a





glimpse of the harbor activity by going to the foot of Main Street. The city has more than 1,000 acres of beautiful parks connected by parkways and broad avenues, forming a complete system and affording more than 25 miles of park driveways.

# Prominent Buildings.

The principal large buildings of the city are: The new Federal Building, costing \$2,500,000;

City and County Hall, costing an equal amount; the 74th Regiment Armory, costing \$750,000; Ellicott Square, the largest office building in the world, built upon the site of the home of Joseph Ellicott, founder of the city, costing \$3,350,000;

the Guaranty Building, the D. S. Morgan Building, Erie County Savings Bank, Mutual Life Building, Mooney & Brisbane Building, Buffalo Savings Bank, Masonic Temple, Dun Building, and others. These are all in the heart of the city. The construction of fine apartment houses has been in progress several years, and the city now has many of these community buildings, which contain every wished-for convenience that money and ingenuity can provide.

Buffalo has 60 public schools, many of them very large buildings of the finest type of school-house construction. Masten Park High School is one of the newest and noblest of these. The State Normal School, University of Buffalo, Canisius College and Buffalo Seminary are also noteworthy.





# Excursions by Trolley.

The entire street-car system of Buffalo and nearly all the suburban lines are under the control of one organization, the International Traction Company. One five-cent fare pays for a ride from one point to any other point, however remote, within the city. Where the service is not direct, as many free transfers are given as are necessary for the passenger to reach his destination by the most direct route. This company has 325 miles of track

and 735 cars, requiring 8,500 horse-power (most of it transmitted electrically from Niagara Falls) to operate them Surplus power, generated during the hours when traffic is less active, is stored by means of electrical accumulators for use during the morning and evening, when the de-

mands are heavy. A double track electric line extends from Buffalo, via Niagara and Tonawanda Streets and the Military Road, Tonawanda, North Tonawanda and La Salle, to Niagara Falls, and across the bridge to Chippewa and Queenston. The trip may also be taken by the Great Gorge Ronte from Niagara Falls to Lewiston, thence to Youngstown and Fort Niagara at the mouth of Niagara River on Lake Ontario. Buffalo to Niagara Falls and return, 50 cents.

Lockport and Olcott (on Lake Ontario) may be reached by way of the Niagara Falls line to North Tonawanda, where the line branches to Lockport.

> Williamsville may be reached via the Main Street cars to city line, transferring to the Williams-

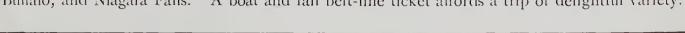
Convention Hall, Cor. Elmwood Ave. and Virginia Street.

ville cars. Hamburg cars connect with the Bailey and South Park Avenue cars at Limestone Hill. Lancaster and Depew may be reached by way of the Broadway line.

Boats of the International Navigation Company make regular trips between Ferry Street, Buffalo, and Niagara Falls. A boat and rail belt-line ticket affords a trip of delightful variety.









## Steam Railways and Stations.

Buffalo is midway between New York and Chicago, and is generally regarded as the greatest railway center of the world. The passenger service consists of about 250 trains daily. Many important railway systems have their terminals here and their stations are situated as follows: Lackawanna, foot of Main Street. Erie, corner of Michigan and Exchange Streets; the Nickel Plate and Wabash Railways also use this station. Grand Trunk, 157 Erie Street, corner Erie Canal, two trains daily via International Bridge, the other trains using the Lehigh Valley Station, 119 Washington Street. Lehigh Valley, 119 Washington Street, near Scott Street, also used by the Grand Trunk. New York Central, 121

Exchange Street, Union Station for: New York Central main lines; New York Central Belt Line around city; Buffalo, Rochester & Pittsburg; Canadian Pacific; Lake Shore & Michigan Southern; Michigan Central; Northern Central; Toronto, Hamilton & Buffalo; Western New York & Pennsylvania, and West Shore.

## Distances by Rail to Various Cities.

The convenience of Buffalo as an exposition city is shown by the following statement of distances from Buffalo to several important centers: Rochester, 70 miles; Syracuse, 151: Watertown, 226; Utica, 204; Albany, 298; Boston, 499; New York, 443; Baltimore, 400; Philadelphia, 446; Harrisburg, 318; Elmira, 146; Binghamton, 203; Washington, 440; Pittsburg, 236; Cincinnati, 427; Columbus, 321; Cleveland, 183; New Orleans, 988; St. Louis, 727; Omaha, 1005; Denver, 1584; Kansas City, 1003: St. Paul, 910; Milwaukee, 601; Chicago, 537; Detroit, 231; Indianapolis, 466; Port Huron, 200; Toronto, 105; Erie, Pa., 89.



City and County Hall.

# Buffalo Objects of Interest.

Masonle Temple—41 Niagara Street. Cazenotia Park—76 acres; Seneca Street Cars. Humbuldt Park—56 acres; Best Street Cars. Zoologledi Gacdens—Delaware Park; Zoo Cars.

Main Street Line.

Soldiers' and Sallors' Monument - Lafayette Square, Main Street,

Womao's Educational and Industrial Folon-Niagara Square.

University of Boffalo-High Street, near Main; Main Street Cars.

Buffielo State Hospital-Forest Avenue; Elmwood Avenue Cars.

Hourd of Trade (Merchants' Exchange)-Corner Seneca and Pearl Streets,

Grosvenor Free Reference Library-Cor, Edward and Franklin Streets; Main Street Cars City and County Hall-Cor, Franklin and West

Engle Streets.

Fort Porter and The Front-Niagara Street Cars

to Porter Avenue. South Park-155 acres; fine botanical display;

Bailey Avenue Cars,
Forest Lawn Cemetery—Red Jacket Monument;
Main Street Cars to Forest Avenue Line.

Masten Park High School-Main Street Cars to North Street.

Crystal Beach-North shore of bake Erle, ten miles from Buffalo; frequent daily trips by steamer.

Woodlawn Bench-South shore of Lake Erie, six miles from Buffalo; reached by steamboat and trolley line.

Iluffalo Free Library, Art Galicry and Historleal Society - Washington Street and Broadway.

Delawure Park-362 acres, of which 133 acres are included in the Pan-American Exposition site: Einwood Avenue Cars.

Adaga adaga

Armory, 74th Regiment—Covers entire square, cost \$750,000; Niagara St. Cars to Connecticut Street.

New Post-Office—Covers entire square, bounded by Ellicott, Swan, Oak and North Division Streets. Cost of site and building, \$2,250 000.

Elifectt Square-Office Building, coversentire square, fronting on Main Street. Cost, site and building.

\$3,500,000.

tity Water Works—Front Avenue near Niagara Street. Eutire pumping plant has a capacity of 187,000,000 gallons every 2t hours. The water is pumped from Lake Eric to a large distributing reservoir on Best Street, between Masten and Jeffersou, and the supply is pure and unlimited

# Some Current Statistics of Buffalo.

Population - (Census 1900) 352,387. Area of tilty - 42.89 square miles. Acreage of tilty - 25,3433/2.

Local Tax Rate-\$18.2186 on valuation of \$1,000.

Death Rate-12.25 per thousand-one of the very best.

Railroads - Including branch lines, 28, with 250 passenger trains daily; nearly 700 mlles of trackage within the city limits.



New Armory, 74th Regiment

## Buffalo Theaters.

The Star-Mohawk and Pearl Streets, The Teck-Main and Edward Streets. The bycena - Washington Street, near

Brondway. Shea's Garden Theater—Pearl Street, near Niagara.

Court Street Theater - Court Street,

Wooderland-Main Street, near Seu-

Street Railways—325 miles, including suburban lines.
Public Schools—64; about 100 other

schools and colleges,

Parks -1,065 acres, embracing 7 parks, 25 miles of park driveways, and numerous minor greenswards and gardens.

Paved Streets-340 miles, of which 229 miles are of asphalt; more miles of asphalt than any city in the world.

thurches -187. Hospitals and Infirmarles -26.



Puolic Library 150,000 volumes. Grosvenor (Reference) Library— 50,000 volumes.

Buffaio Historical Society Library - 25,000 volumes.

Natural Gas—Piped from Canada, northern Pennsylvania and Eric County wells.

Police Department-783 mcn. Fire Department-490 mcn.

Customs Receipts—\$687,684.98 in 1900.

Elevators-10, with capacity for 22,000,000 bushels.

Grain Receipts—By lake, in 1900, were 214,971,364 bushels.

Coal Trestle-Largest in the world, the Lackawauna, nearly one mile long.

Coal Recelpts-By rail, during 1899, 3.055,952 tons.

toal Shipments-By lake, 1960, 1,826,091 tons.

Lumber Trade - Buffalo, with the adjacent Tonawandas, forms the second largest lumber market in the world.

Live Stock-Horses, cattle, sheep and hogs, about 9,000,000 head are handled yearly.

Manufactories - 3,500, with about 100,000 operatives.

Hreak water—Longest in the world, four miles long; cost \$4,000,000.
Vessels Arrived—In 1900, 4,945; toninge, 5,341,128.

Vessels Cleared—During 1900, 5,-028; tonnage, 5,360,094.

Electric Power—Generated at Niagara Fails, transmitted to Bulfalo in practically uulimited quantities.

Newspapers and Periodicals-80, of which It are daily newspapers.

## Outing Places.

Niagara Fails, Lewiston and Niagura-on-the-Lake-Reached by Niagara River steamers, and steam and electric railroads.

Ontario Beach, near Rochester-Via N. w York Central Railway. Chantanqua Lake-Via Western New York & Pennsylvania

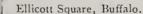
Railroad to Mayville.
Cassadaga Luke—Via Lake Shore,
Nickel Plate or Western New
York & Pennsylvania Roads to
Dunkirk, thence on Allegany
Valley line.

Portage Fatts-Via Eric Railway, Sliver Lake-Via Eric and Silver Lake Railroads.

tonesus Lake-Via Eric Railway

Lake Kenka Via Lackawanna or Eric to Bath and Hammonds-

Watkins Glen- Via New York Central to Geneva, thence by boat to Wutkins, or to Canaudaigna and thence by Northern Central to Watkins.



# Hotels, Etc.

The hotel capacity of Buffalo has been vastly increased by the construction of many new ones. Many apartment houses have been remodeled into rooming houses, and about 7,000 private-house owners, who will open their houses, have registered with Superintendent W. D. Thaver of the Exposition Bureau of Information in Ellicott Square. Mr. Thaver estimates that the city and suburbs can provide comfortable accommodations for 250,000 visitors daily. Following are the names of some of the hotels, and their rates and capacity, all of them being on the European plan:

Men and Women, Family Parties.	Rate, \$1.50 and up per day.	NAME.
Rate, \$3.00 and up per day.  NAME. LOCATION. CAPACITY.  Iroquois - Main and Eagle Sts 1000  Lenox - North near Delaware Ave 600	NAME. LOCATION, CAPACITY, Victoria - Niagara, Eagle and Franklin Sts	Austelh – 1067-1 Zenobia – 16, 18 Corucil – 1200 M Arlington – Ex Russell House- Russell – 42 Nig
Rate, \$2.50 and up per day.	Rate, \$1.50 per day.	= Irviuglou=351 = New Grenuer=
New Tifft House-465 Main St 550	Voss House-999 William St 100	Kirkwood -348
Rate, \$2.00 to \$3.00 per day, two in a room.  Buckingham- Allen and Mariner Sts	Brainard Honse—1039 William St	The Manhattar Charlotte—70 1 Sisters of St. Jo The Lillian—2
Rate, \$2.00 and up per day.	Rate, \$1.00 and up per day.	= Riverside—866, = Paul Voorhees
Genesce—Main and Genesee Sts	Kenilworth - Elmwood Ave, and Anderson Place.300 The Annex-Swan and Pearl Sts 200	The Bank-28,
Rate, \$2.00 per day.	Twentieth Century—Amherst and Delaware Ave.150 Aleazar—Amherst, near Delaware Ave500	Home
Roanoke—156 West Chippewa St	Columbia - Seneca and Wells Sts	W. E. Bought R. G. Payne, The Auburn, C. H. Robinso S. W. Bolles, 1
	Rates of Fare in Public Vehicle	29

AME.	LOCATI	ON.					C.	AP	.3	CIT	١
stellh-1067-1	073 Grant St	t								200	)
obia—16, 18	Prospect A	ve.								100	)
ucll—1200 N	lain St. 🔒									100	)
ington - Exc	change and	Wel	ls	St	s.					200	)
evill Honer_	20. 12 Swan	41								1.60	1

Rate, \$1.00 and up per day.

-Coruct/-1200	O Main St						 	100 -	
Arlington - 1	Exchange and	Wells	Sts.				 	200	
Russell Hou.	sc39-43 Swan	St					 	160	
Russell - 42	Viagara St						 	250	
Irviugtou-3	51 Washington	n St.						100	
New Grenner	r-Washington	rand l	Hur	on	St	s.		400	
Kirkwood -?	348 Washington	n St					 	125	
The Manhatt	fan 620 Main	St						. 300	
Charlotte-70	) Delaware A	ve						. 130	
Sisters of St.	Joseph - 2053 M	nin St						130	

#### Rate \$1.00 per day.

The Lillian—247 W. Utica, near Elmwood	Ave.	. 100
Riverside—866, 868 Prospect Avc		. 200
Paul Voorhees-935-945 W. Ferry St		. 375
The Bank-28, 30 E. Genesee St		. 150

#### es Near the Exposition. Rate \$1.00 per day

mate, the open	 ٠,	•			
W. E. Boughton, 623 Auburn Ave.					
R. G. Payne, 216 Lancaster Ave					
The Auburn, 660 Auburn Ave					
C. H. Robinson, 711 Auburn Ave.					
S. W. Bolles, 201 Voorhees Ave					10

#### Rates of Fare in Public Venicles.

One passenger, not exceeding one mile, 50 cents; cach additional passenger, 25 cents.

One passenger, one mile and not exceeding two miles, \$1.00; for each additional passenger, one half the regular rate.

For conveying one passenger over two miles, 50 cents for each additional mile, and for each additional passenger, one-half the regular rate.

Use of any licensed vehicle by the day, for one or more passengers, \$8.00.

Use of any such vehicle by the hour, for one or more passengers, with

the privilege of going from place to place and of stopping as often as may be required, \$1.50 for the first hour and \$1.00 for each additional hour.

Distances must be measured by the most direct traveled route, and, in all eases, unless otherwise specified at the time of hiring the vehicle, the arrangement shall be deemed to be by the mile.

Each passenger shall be allowed to have carried one trunk or other piece of baggage free. Additional pieces 5 cents each if within a mile, and To eents each if more than a mile.

All public vehicles must have licenses,



# " NIAGARA" BY SEARCHLIGHT.

The only successful picture of the great cataract which has ever been taken under these conditions. It is one of a series of remarkable examples of night photography, executed by Orrin E. Dunlap, who for years has made a specialty of pictures of Niagara Falls scenes and incidents.

# The Great Falls of Niagara and How to See Them.

If our time is limited, and we desire to see as much as may be in a few hours and at small expense, we will get aboard an electric car at Prospect Park, and buy tickets for the full belt-line trip. This will take us across the new arch bridge nearest the Falls, thence skirting the Canadian shore to the Horseshoe Falls. It is well to remain here a little time. One of the grandest views of the Falls is obtained from the bridge or from the Canadian side, for we are then in front of them and the eye may sweep the entire face of both cataracts. At the Horseshoe Falls we may come close to the water and feel the vibration of the mighty thunder of the torrents as it has roared for ages. The sensation is deeply impressive to any sentient being.

#### An Up-River Trip.

Again taking the car, we will diverge from the belt-line trip, going up-stream far enough to see the Dufferin Islands (named in honor of Lord Dufferin) and the great upper rapids, then returning and proceeding down-stream toward Suspension Bridge. We might, if desired, go still farther up, to the end of the route at Chippewa, a little settlement where the Chippewa Creek cuts into the

river and connects it with the Welland Canal a few niles to the westward. It is navigable for craft of considerable size.

#### Rainbows for Everybody.

At the right time of day—and I know not but many times a day—above the Horseshoe Falls you may see rainbows galore. At three in the afternoon I have seen two complete rainbows—a very pretty sight, indeed—above the bellowing cataract. In fact, rainbows a-plenty are visible in Niagara spray from some point whenever the sun shines. The route of the railroad is through Queen Victoria Park, which the very enterprising government of Ontario has laid out most beautifully and dedicated to the public use for all time. The government has acquired several miles of land along the river, in order that visitors may have the utmost freedom in



their enjoyment of the wonderful works of nature in this locality. No public act could be more popularly received.

### Along the Top of the Cliff.

We are on the way to Queenston, now, seven miles away. The route takes us along the edge of the high cliff, so that we



have an almost continuous view of the swirling river with its singular and everchanging markings of white foam. Now the water is a deep green, now a turquoise blue—never the same shade long, for with every hour and variation of light a different effect upon the eye may be noted. We pass the huge cantilever bridge of the Michigan Central Railway, and the great new steel arch bridge of the Grand Trunk Railway which has recently displaced the old suspension bridge. They represent two of the giant achievements of modern engineering exactness and skill. The river now becomes a turbulent stream, confined between narrow banks, and dashes onward with tremendous force, continuing thus for nearly a mile. This part of the river is known as the Whirlpool Rapids. Sunken rocks send the water flying high in the air, and the stream always has the aspect of a raging flood.



## Viewing the Whirlpool from Aloft.

At a distance of three miles from the Falls we come to the Whirl-pool, a great body of slowly-moving water, boiling like a vast cauldron, and grinding in its depths huge logs that have come down stream. The point of view from the car, perched high upon the cliff, is such as to enable the observer to watch the action of the water throughout the great pool. It is here that the closing scene of many a Niagara tragedy is enacted—the finding of the body of the victim of the waters. The Whirlpool possesses a singular fascination, and is visited by many people, who linger on its shores with a morbid interest, watching its surface for hours. The electric road almost encircles the pool, following the high bank at a safe distance, and then strikes away toward Queenston, still keeping within view of the river.

## Landscapes of Enchanting Beauty.

There is no lovelier landscape than that which nature has spread out before the observer who stands upon Queenston Heights, at the base of the Brock Monument. The Canadians are good farmers, and their fields and orchards are under perfect tillage. On the American side the prolific orchards and fertile, well-kept lands of Niagara County are no less pleasing to the eye. The lower Niagara—broad, deep, blue, placid and majestic—winds gracefully onward before you to Lake Ontario, seven miles away. The Brock Monument is one of the noblest columns on the continent—a fluted Doric shaft of granite, 194 feet

high, perpetuating the memory of General Isaac Brock, who fell in the battle of Queenston, October 13, 1812. The place where he fell, near the foot of the hill, is marked by an appropriate stone.

#### Down the Grade to Queenston.

We now descend the grade by a circuitous route, passing the ruins of the first printing office in Upper Canada, and come to the old village of Queenston. The



Fort Niagara, at the Mouth of Niagara River.



railroad leads over a new suspension bridge to Lewiston, another old and equally quiet village, the head of navigation, and the place of arrival and departure for the lines of steamers running to Toronto and other Lake Ontario points. Lewiston is the terminus of the Great Gorge Route and we shall return to Niagara Falls by that line, following the windings of the river and never getting more than a few feet away from the violent waters. The trip is alive with interest and novelty, and has no

parallel. The rapids are always a roaring flood and spray is ever dashing high from sunken obstructions. The scenery of the gorge, with dark evergreens growing wherever they can obtain root-hold, and other foliage scantily covering the dull gray of the opposite cliffs, is never lacking in interest. We stop at the station opposite the Whirlpool Rapids and spend half an hour watching the angry play of the torrent. You may have your photograph taken here, with the rapids for a background. Before leaving the river we pass beneath the two great bridges, noting with a glance the massive and enduring character of their construction, and then gradually ascend the high bank, returning to the point from which we started. The tour, if taken leisurely, will consume the better part of half a day—a day would not be an extravagant allotment, while it may be made in two or three hours.

#### Prospect Park, the Incline and Maid of the Mist.

But you have not yet seen Niagara. The State of New York owns Prospect Park, which abuts on the river and extends along the American Rapids above the American Falls. Goat Island, comprising 75 acres, is also owned by the State, and is reached from Prospect Park by a new bridge of massive stone arch construction. The view of the gorge and the American Falls from Prospect Park is usually the first one obtained by the visitor who goes to Niagara, Falls from the American side. One may obtain very comprehensive views from this park, but Niagara deserves to be thoroughly "done" by any visitor who may have the time at his command.



By means of the Incline Railway (ten cents for the round trip), or by the free stairway, we may descend from Prospect Park to the level of the river below the Falls on the American side. Similar conveniences are provided on the Canadian side. At the foot of the incline, for 50 cents we may go aboard the Maid of the Mist, put on a rubber suit and ride up as close to the aprons of the two great cataracts as the force of the strong propeller can drive the staunch craft. In this manner only may one learn to appreciate the mighty character of these natural wonders, representing in their volume and descent of 160 feet the energy of five million horse.

#### To Goat Island Points.

The trip around Goat Island may be made in any of the public vans at a cost of 15 cents, with as many stop-overs as you may wish. The first stop is at Luna Island, where we go down several flights of steps, cross a substantial stone arch bridge and view the American Falls from a point between the Bridal Veil Falls and the American.

Retracing our steps, leisurely, of course, and walking a few rods from the head of the stairs, we come to the stairway leading to the Cave of the Winds. It is necessary to wear oil-skin clothing and to proceed with care. The use of the suit and the services of the guide cost one dollar. You go by the railed pathway before the Bridal Veil and then behind the American Falls, where time and the waters have made a cave, about 100 by 160 feet, well named on account of the tremendous suction caused by the great volume of falling water. This trip may be made with safety, though the deafening roar of the mighty torrent must ever accompany it.

The next convenient stopping place is at the head of the stairway leading to Terrapin Rock, at the Horseshoe Falls. Here again we come close to the edge of the great fall which we had first visited on the Canadian side. The view, whether into the seething waters below, across the face of the fall, or up stream against the broad waters tumbling onward toward the cliff from which they soon must leap, is impressive and fascinating.

Returning again to the van we continue to the Three Sisters Islands, all separated by dashing streams, spanned by substantial bridges. The curious shapes of the rocks worn by the waters for





ages will interest you. The view is across the broad, swift river, or up stream toward the long line where the placid waters break into ripples and begin their swift course down stream. Passing along to the head of the island we come to broad lawns and shady seats, well removed from the roar of the torrents, a place where a book and a nook and a lover's look are the sum of happiness. I have gone too swiftly to give historic detail and refer you to libraries for those matters. The whole region is rich in history and mystery, and with a mind thus inclined you will find a large measure of pleasure in such treasure.

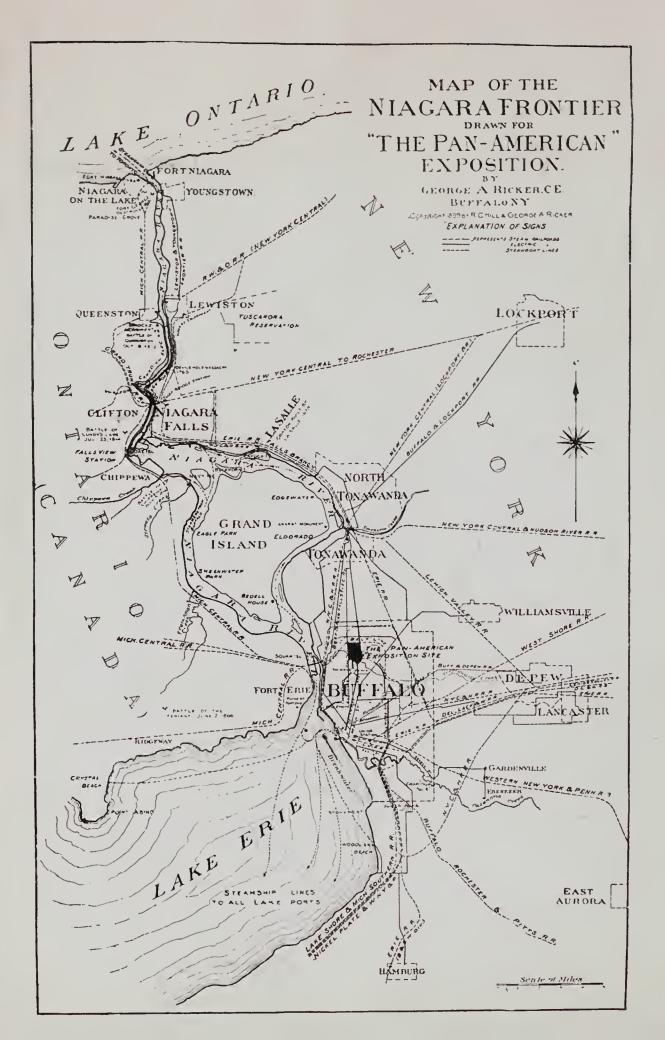
#### Niagara in Harness.

The harnessing of Niagara was accomplished some years ago by the construction of a huge brick-lined tunnel, 6,000 feet long, by the Niagara Power Com-

pany. The mouth of the tunnel is at the water's edge in the river below the Falls and it extends under the city of Niagara Falls to a point near the river over a mile above the cataracts. Here deep cuts were made through the rocks to the level of the tunnel, about 140 feet below. At the bottom of these shafts, which are in the form of great slots, the huge turbine wheels are arranged. The water is led from the upper river into a forebay, thence into steel penstocks, 13 feet in diameter, to the wheels at the bottom of the pits. The water passes from the wheels to the tunnel and thence out into the river below the Falls. There are now ten wheels thus installed, each carrying a dynamo at the surface of the ground 140 feet above the wheel and developing over 5,000 horse-power each, a total of 50,000 horse. Ten more wheels are being installed in the same manner. It is this great power that is transmitted to Buffalo and the Pan-American Exposition. Another great power plant, constructed upon a somewhat different plan, has been installed in substantial buildings below the cliff and near the mouth of the tunnel referred to in the preceding sentences. This is owned by the Niagara Hydraulic Power & Manufacturing Company, and the water is led to the forebay above the cliff by means of a surface canal and thence to the wheels by an enormous penstock. The great dynamos are

attached to the wheel shaft and about 30,-000 horse-power is developed. The harnessing of Niagara has greatly increased the manufacturing industries of the Falls city.







# How to Arrange Your Trip to the Exposition.

Anyone contemplating a trip to the Exposition can save much time, and see the Exposition to better advantage than in any other way, by enlisting the services of those who are familiar with all the requirements of such an undertaking. The "Weekly Trips" Company was organized for this very purpose. The head office

is in the rotunda of the great office building known as the Ellicott Square, on Main Street, Buffalo, N. Y., and its agents are to be found throughout the country, the local agents of every railroad and steamship line being their authorized representatives. The company is composed of men of the highest personal and business responsibility. By arranging with your nearest railroad ticket agent you place yourself in the hands of friends who will smooth your way, and enable you to get the fullest measure of rest, pleasure and profit out of your trip. While the plan is very simple, it requires the efficient and elaborate organization of this company to watch your interests. For a fixed sum the company gives you a book of coupons that covers your visit to Buffalo from the time of arrival until your departure, and every legitimate item of expense. Their plans are described in their booklet, which can be had by forwarding four cents for postage.

For example: The "Weekly Trips" Company, by using their red tag, transfer your baggage from and to any depot by their special delivery. Their coupon book covers your hotel or private-house accommodation, trolley car fares, meals at hotels, cafes, and restaurants in Buffalo, Niagara Falls, N. Y., Niagara Falls, Ontario, and Lewiston, the Exposition grounds and Midway restaurants, Maid of the Mist Steamboat Company, the Reservation Tower, the Reservation drive around Goat Island, in fact everything

worth seeing everywhere. Their agents are subject to your orders and you can trust them to render efficient service. Their hotel and private-house accommodations are the very best that can be secured.

Their plans cover three days to six months, at a specified price, and you are assured of accommodations. The advantage in thus saving time, money and annoyance is at once apparent. The "Weekly Trips" Company will be pleased to have an inquiry from you by addressing them at their office in the Rotunda Floor of Ellicott Square Building, Buffalo, N. Y. This office is a permanent headquarters for information for all patrons of the company. Write direct if no agent is near you.





"Good Night."

